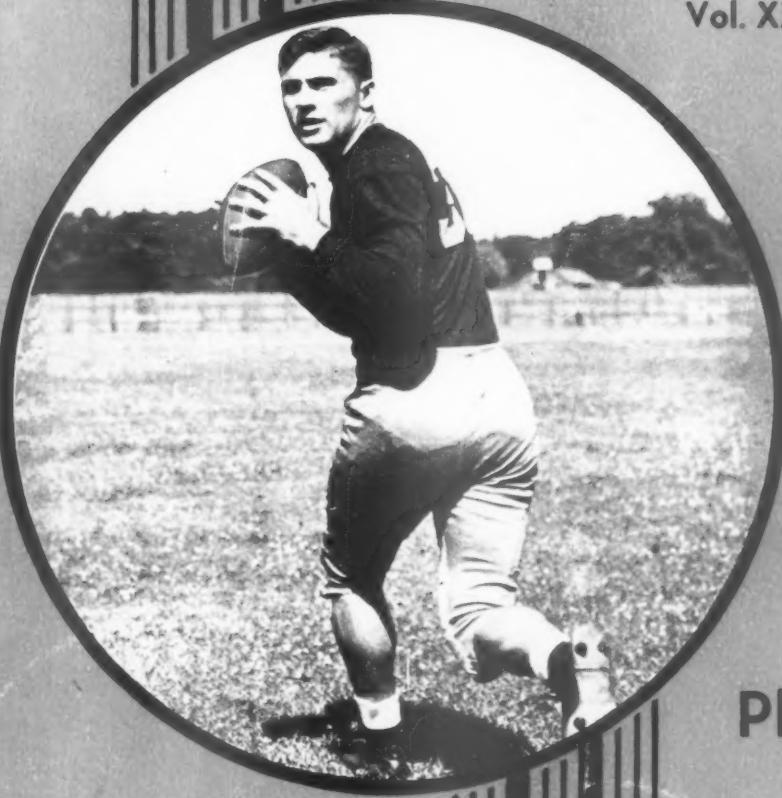


# ATHLETIC JOURNAL

Vol. XXVIII, No. 2

October, 1947



## Play of the Offensive End in the T

Tom Lieb

## Soccer Defense

A. W. Marsh

## Center Play and the Tall Pivot Man

Herbert W. Read

Always **1<sup>ST</sup>** in  
**PERFORMANCE**



### VOLLEY BALLS



**18VH** Laceless  
**9VH** Laceless  
**V19** Laceless

### FOOTBALLS

**R5** Official  
**SRB**  
Junior Official  
**6-OS**  
Collegiate



### BASKETBALLS

**RLB** Last-Bilt\*  
**VMS** Molded  
**AXH** Laceless  
**LH** Laceless



*Rawlings*

**MEANS QUALITY!**

### PROMPT SHIPMENT

You can now have all you need of Rawlings Footballs, Basketballs and Volley Balls. Their reputation for unmatched performance and quality is satisfactorily fulfilling an ever-growing demand from those who want the best.

**AVAILABLE THROUGH LEADING  
ATHLETIC GOODS DISTRIBUTORS**

\*Licensed under  
Patent Nos. 2175128,  
2116479, 2182052



*Rawlings Athletic Equipment*

THE FINEST IN THE FIELD!  
MANUFACTURING COMPANY - ST. LOUIS 3, MO.



# "Like 5 ounces of dynamite"

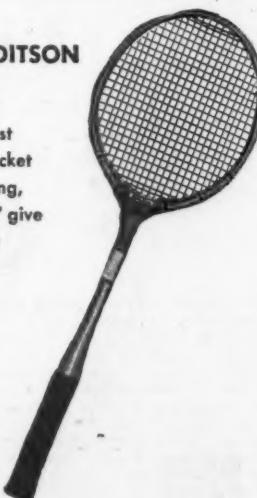
That's how Jack Purcell, world-famous badminton champion, describes Wright & Ditson's new Purcell Personal. And no wonder!

Every bit of weight in this rapier-like bat is *working-weight*. Trimmed down to less than 5 ounces for perfect finger-tip control, the Purcell Personal is packed with power.

There's power-plus in its fast-flexing shaft of high-temper steel... in the reinforcing laminations of the "blended hardwoods" in its bow. This Spalding-built racket really stands up under the rough usage of scholastic and collegiate play.

#### WRIGHT & DITSON GOLD STAR

Lightest, strongest wood-shafted racket you can buy. Long, tapered "flakes" give added flexibility without added weight.



# WRIGHT & DITSON

THE ATHLETIC JOURNAL

# The ATHLETIC JOURNAL

Nation-Wide Amateur Athletics

Published by

THE ATHLETIC JOURNAL PUBLISHING CO.

6858 Glenwood Avenue  
Chicago 26, Illinois

MAJOR JOHN L. GRIFFITH  
Founder

JOHN L. GRIFFITH  
Publisher

INFORMATION EDITORS  
1946-1947

## FOOTBALL

Jeff Cravath, University of Southern California  
Otis Coffey, Douglas, Arizona, High School

## BASKETBALL

Cliff Wells, Tulane University  
Richard Christensen, Richmond, Calif., High School

## TRACK

Frank Potts, University of Colorado  
P. A. Knuth, University of Alabama

## BASEBALL

Lloyd Messersmith, Southern Methodist University  
J. E. Wilcox, Center Moriches, N. Y., High School

## SWIMMING

Ted Webster, Syracuse University  
E. B. Jackson, New Trier, Winnetka, Illinois

## WRESTLING

Fendley Collins, Michigan State University

## BOXING

Archie Hahn, University of Virginia

## TENNIS

Richard Swinnerton, Princeton University

## GOLF

Sid Richardson, Northwestern University

## INTRAMURAL

L. G. Staley, Ohio State University

## PHYSICAL EDUCATION

Alden W. Thompson, Wayne University  
C. E. Forsythe, Mich. High School Ath. Assoc.



PUBLISHED MONTHLY except July and August by the Athletic Journal Publishing Company, 6858 Glenwood Avenue, Chicago, Illinois. Member Audit Bureau of Circulation. Request for change of address must reach us thirty days before the date of issue with which it is to take effect. Duplicate copies cannot be sent to replace those undelivered through failure to send advance notice.

SUBSCRIPTION PRICES: \$2.00 per year; \$3.00 for two years; \$3.75 for three years; \$1.20 for six months; \$1.00 for five months; Canada \$2.50 per year; foreign \$2.75 per year. Single copies 25 cents for current volume, 35 cents per copy for back volumes. Copyright 1947, The Athletic Journal Publishing Company. Entered as second-class matter, August 14, 1925 at the post office at Chicago, Illinois, under the Act of March 3, 1879.

October, 1947

Volume XXVIII

Number

## CONTENTS

### PAGE

4	From Here and There	
6	Sprint Champions of the Past Olympics	Dean B. Cromwell
8	The Play of the End in the T	Tom Lieb
11	Center Play and the Tall Pivot Man	Herbert W. Read
12	Coaching School Highlights. Reports on Defense:	Otis Coffey Walter Hellmann
12	for the Team	Jess Neeley
12	for the Individual	A. N. McMillin
46	of the Army	Herman Hickman
14	Combining the T with:	
15	The Single Wing (Balanced Line)	Tom Bulkley
15	The Single Wing (Unbalanced Line)	Vic Dorris
15	The Double Wing	Clary Anderson
15	The Box	John W. O'Connor
18	The Winged T	Mike Caskey
20	The Single Wing (Unbalanced Line)	W. W. Campbell
22	The Box	Luke Whetstone
22	The Notre Dame	Marty McDonough
62	The Single Wing	Charles Hendsch
24	Soccer Defense	A. W. Marsh
30	Penn's Single Wing	Walter Hellmann
50	Training for Cross Country	Bill Easton
56	The Overbalanced Attack	Gilbert Wilson
60	Numbering Zones for a Passing Attack	Ross J. Shaw

### FRONT COVER ILLUSTRATION

Johnny Lujack, Notre Dame quarterback, sights a receiver during practice drills.

**Send us ALL your football equipment for RECONDITIONING  
You'll be delighted with the "miracles" we can do!**



**Raleigh** ca  
NEW ROCHELLE, N. Y.

You'll have grand looking equipment next season if you send us all your football gear . . . from head to foot . . . for reconditioning. And the equipment will be good for many more seasons, too. We clean it — sterilize it — repair it — and replace parts where necessary. We ship it prepaid in sealed mothproof containers . . . all ready to issue for next season. (We will recondition only such of your equipment as we believe will warrant the cost.) We have an organization of skilled specialists doing the finest reconditioning work for leading schools, colleges, army and navy posts.

WRITE US FOR SHIPPING BAGS AND SHIPPING INSTRUCTIONS

**"If it's from Raleigh, it's Right!"**

**Send us your  
Helmets  
Shoulder Pads  
Hip Pads, Pants  
Jerseys, Shoes  
Footballs. Also  
Cross Country  
Equipment**

**RALEIGH COMPANY • 44 Columbus Avenue, New Rochelle, N. Y.**

**"Income up 25%  
in less than a  
year"**  
says  
**Ex-Coach**



"And my income is still climbing," reports Gilbert J. Knowlton, of Adams Center, New York, who gave up coaching less than a year ago, to become a Mutual Life representative.

Like many other ex-coaches throughout the country, Mr. Knowlton has found personal satisfaction and financial security in selling for The Mutual Life. He says:

*"After teaching and coaching for 10 years, I was looking for a permanent career that rewards effort and initiative. And I've found it in the life insurance business. In addition to my increased earnings, I find it is a most satisfying experience to help build financial security for other people."*

You may have the qualifications necessary for success in this dignified, well-paying career—and you can make sure very easily! Simply send for our scientific Aptitude Test. The test may be completed in your own home . . . in 30 minutes. A qualifying score makes you eligible for an excellent on-the-job training course, plus an income to help you become established. And the Mutual Lifetime Compensation Plan provides for liberal commissions, service fees and a comfortable retirement income.

Many coaches have started on a great career by taking this Aptitude Test. Mail the coupon today.

## THE MUTUAL LIFE INSURANCE COMPANY of NEW YORK

34 Nassau Street  
New York 5, N.Y.



Alexander E. Patterson  
President

GENTLEMEN:  
Please send me your aptitude test.

Name \_\_\_\_\_

Home Address \_\_\_\_\_

A26

# from here and there



TWO more to add to the ever-growing list of high school coaches who have gone to collegiate ranks: Luther Poling, athletic director and head coach at Willochra Union High School, Cleveland, has been appointed director of athletics at Marshall College. Orv Dermody, coach at St. Francis High School in Milwaukee, and prior to that assistant coach at the University of Florida, goes to St. Norbert College as assistant football and head basketball coach. . . . When Bill Reed resigned his position as executive assistant of the N.C.A.A. and director of the Western Conference Service Bureau to assume duties as administrative assistant to Senator Homer Ferguson, his place was taken by Walter Byers, former foreign sports editor for the United Press. . . . Asa Bushnell, Commissioner of the Eastern Collegiate Athletic Office, has named George Shiebler as his administrative assistant. Shiebler was sports publicity director at N.Y.U. and in 1945 won the Helms Foundation Medal.

\* \* \*

THE University of Alabama has compiled the best football record in the country over the past fourteen years. The Crimson Tide has won 98, lost 21 and tied 7. They are closely followed by Tennessee, Notre Dame and Duke. . . . Norman Whitten leaves his position as track coach and assistant basketball coach at Lewiston, Maine, High School to assume the role of track coach at Bergen Junior College, Teaneck, New Jersey. John Alberti, assistant coach at Stearns High School, Millinocket, Maine, replaces Whitten at Lewiston. . . . Danny Lewis, recently resigned football coach at Colby College, is the new athletic director and head football coach at Germantown, Pennsylvania, Academy. . . . J. Edward Donnelly, coach at Hamden, Connecticut, High School, has been appointed as the new freshman football coach at Boston University. . . . Howie O'Dell has been added to the staff of the East team for the annual East-West game. He will assist Bernie Bierman. Andy Kerr who has coached every East team will also assist. . . . Four more high schoolers to add to the previously mentioned fourteen who have taken college positions: Jim Smith, athletic director at Brighton, New York, High School has been named to coach freshman soccer, basketball and lacrosse

at Cornell. Cornell also named Eddie Pierce, former Ithaca High School football coach, to handle the 150 pounders. Roland Brown, director of athletics at Worcester Academy, assumes similar duties at Rensselaer Polytechnic Institute. Elmer Engel leaves Barrington, Illinois, High School for a position at the University of Illinois. His successor is Les Harman, former Northwestern University basketball star. Harman formerly coached at Hebron, Illinois, High School.

\* \* \*

GLENN "PAT" HOLMES for eighteen years head football coach at Oak Park, Illinois, High School, has resigned effective with the end of the current football season to accept a position with the Madison, Wisconsin, Board of Education where he will be director of physical education and recreation for the school system. During his tenure at Oak Park, his teams have had outstanding success, winning eleven suburban championships and putting together a string of thirty-seven games without a defeat from 1937 to 1947. . . . C. B. "Cliff" Fagan is the new assistant secretary of the Wisconsin High School Athletic Association. He has coached at three Wisconsin high schools and been director of health and physical education at Eau Claire State Teachers College. . . . Boise, Idaho, High School compiled an enviable record last year when their teams won the state basketball tournament, were runners-up in track and baseball, and though no championships are awarded in football or tennis, they had the outstanding team in those sports. The football team, coached by Robert S. Gibb, has won twenty-eight straight. . . . Boxing remains a big sport in Idaho, ranking by number of participants after football, basketball, track and baseball.

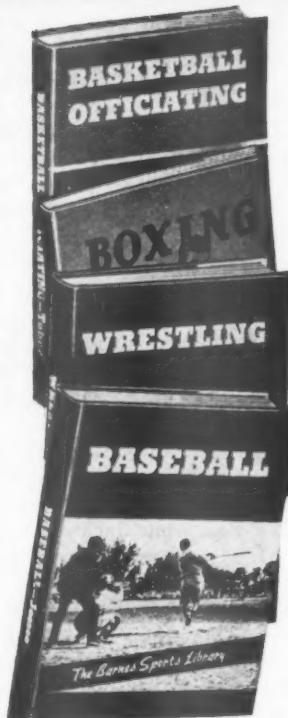
\* \* \*

ALL IS not bloody on the football field as witness Emil Sitko, star Notre Dame halfback, who missed several days of practice due to a sprained knee, caused when the little red head rolled over in his sleep and caught his foot in the footboard of the bed. . . . Frank Howard of Clemson has never coached anywhere but at the South Carolina school. After graduating from Alabama he was signed as an assistant to Jess Neely and in 1940 became

(Continued on page 62)

# Especially Recommended as COACHING MANUALS and as SELF-TEACHERS

(These Books are widely used as text books in  
America's Leading Colleges and Universities)



## The Barnes Sports Library

A library of practical, up-to-the-minute sports books that cover fundamentals, techniques, coaching and playing hints and equipment. Written and illustrated by prominent coaches and other leading authorities. Noted for their value in practical application. Extremely clear and easy to understand. Priced at only \$1.50.

1. ARCHERY <i>Reichart &amp; Keasey</i>	13. ICE HOCKEY <i>Edward Jeremiah</i>	26. TRACK AND FIELD <i>Ray M. Conger</i>
2. BASEBALL <i>Daniel E. Jesse</i>	14. JIU-JITSU <i>Frederick P. Lowell</i>	27. VOLLEY BALL <i>Robert Laveaga</i>
3. BASKETBALL <i>Charles C. Murphy</i>	15. LACROSSE <i>Ted Stanwick</i>	28. WRESTLING <i>E. C. Gallagher</i>
4. BASKETBALL ILLUS- TRATED <i>Howard A. Hobson</i>	16. PHYSICAL CONDITIONING <i>Stafford &amp; Duncan</i>	
5. BASKETBALL OFFICIATING <i>Dave Tobe</i>	17. RIFLE MARKSMANSHIP <i>William L. Stephens</i>	
6. BETTER BADMINTON <i>Jackson &amp; Swan</i>	18. SIX-MAN FOOTBALL <i>Ray O. Duncan</i>	
7. BOXING <i>Edwin A. Haislet</i>	19. SKATING <i>Putnam &amp; Parkinson</i>	
8. CHEERLEADING <i>Loiken &amp; Dypwick</i>	20. SKIING <i>Walter Prager</i>	
9. FENCING <i>Joseph Vince</i>	21. SOCCER <i>Samuel Fralick</i>	
10. FOOTBALL <i>W. Glenn Killinger</i>	22. SOFTBALL <i>Arthur T. Noren</i>	
11. FUNDAMENTAL HAND- BALL <i>Bernath E. Phillips</i>	23. SWIMMING <i>R. J. H. Kiphuth</i>	
12. GOLF <i>Berg &amp; Dypwick</i>	24. TENNIS MADE EASY <i>Lloyd Budge</i>	
	25. TOUCH FOOTBALL <i>John V. Grombach</i>	

26. TRACK AND FIELD  
*Ray M. Conger*

27. VOLLEY BALL  
*Robert Laveaga*

28. WRESTLING  
*E. C. Gallagher*

### CLAIR BEE'S BASKETBALL LIBRARY

29. THE SCIENCE OF  
COACHING

30. MAN-TO-MAN DEFENSE  
AND ATTACK

31. ZONE DEFENSE AND  
ATTACK

32. DRILLS AND  
FUNDAMENTALS

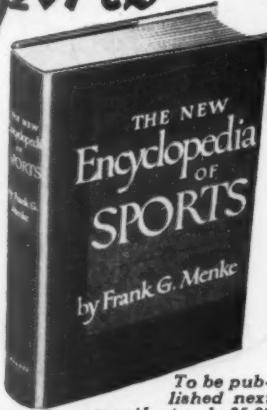
ONLY \$1.50 EACH

(No order for less than 3 volumes accepted)

## The NEW Encyclopedia of Sports

By FRANK C. MENKE

The definitive book on sports that no coach, athletic instructor, sports writer, radio commentator, sport fan or athlete can afford to be without. Completely revised and rewritten by that master sports historian and statistician, Frank G. Menke. The book that even in its earlier, small form "Believe It or Not" Ripley said would "settle 4 million arguments on sports and athletics." Over 1,000 pages. Illustrated. \$5.



To be pub-  
lished next  
month at only \$5.00  
a copy. Please order early.

**A. S. BARNES AND COMPANY**

Publishers: 67 West 44 St., NEW YORK 18, N. Y.

**5 DAYS' FREE EXAMINATION—USE COUPON**

A. S. Barnes and Company  
Dept. 5810, 67 West 44 Street  
New York 18, N. Y.

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	
24	25	26	27	28	29	30	31	32	33		

NAME.....

ADDRESS.....

CITY..... ZONE..... STATE.....

Check here if you are **ENCLOSING** with this coupon full payment for the books ordered. Then WE pay all postage charges. The same 5-day return-for-refund privilege applies, of course.

(Outside Continental U.S., send remittance **WITH** Coupon.)



### SHOCK-ABSORBING!

Seamless, knitted back for pinch-proof comfort! Slip-proof! Non-absorbent, washable. Available for your basketball teams in school-matching colors: Royal Blue, Gold, Kelly Green, Scarlet, Black.

Buy "Bub" Protectors at your sporting goods dealer

**John B. Flaherty Co. Inc.**  
Established 1899

611 EAST 123rd STREET

BRONX 34, NEW YORK

THE BEST TEAMS ARE BEST EQUIPPED!

# Sprint Champions of the Past Olympics

By **Dean B. Cromwell**

Track Coach, University of Southern California

**N**O QUESTION is more alive, when track and field fans gather to discuss the 1948 Olympic Games at London, than that of, "Who will succeed the great Jesse Owens as Olympic sprint champion?"

It's a natural question, which stems from the deep interest of American followers of track and field athletics in the sprint races.

Other nations may place more stress on other events on the Olympic schedule. Finland goes for the distances and the javelin; England usually emphasizes the mid-distances; pre-war Japan worked overtime on the broad jump and hop-step-jump; but in the United States it is the sprints which thrill the spectators to the greatest degree.

Ever since the glittering days of Charlie Paddock, the title of "world's fastest human" has been the chief goal of aspiring athletes. The Warmerdams, Cunninghams, Carrs and Steers have achieved full recognition, but it has been the Wykoffs, Tolans, Owenses and Davises who have become the "household words" on the sports pages.

This is but natural, because the United States has almost completely dominated the championships in the Olympic Games since the modern revival in 1896. Eight of the eleven champions in the 100-meter dash have been from our nation, as have seven of the nine winners in the 200-meter sprint.

In 1896 at Athens it was T. E. Burke who won the 100 meters in 12s. flat and then F. W. Jarvis lowered the record to the respectable time of 10.8s. in the 1900 Games at Paris.

In 1904 at St. Louis Archie Hahn won in 11s. flat and then Hahn repeated in the '06 mid-Olympiad event at Athens in 11.2s. Hahn is the only sprinter ever to win two successive Olympic titles in any flat racing event short of 800 meters.

The first non-American Olympic sprint champion was R. E. Walker of South Africa who equalled Jarvis' Olympic record of 10.8s at London in 1908, but the championship returned to the United States in 1912 when R. C. Craig won in similar time at Stockholm.

Charles W. Paddock won at Antwerp in 1920 in 10.8s and then H. M. Abrahams of Great Britain at Paris set a new Olympic record of 10.6s. The biggest up-

set in Olympic sprint annals was registered in 1928 at Amsterdam when Percy Williams of Canada was champion in 10.8s.

In 1932 at Los Angeles Eddie Tolan set the still-standing Olympic record of 10.3s. This time was equalled by Jesse Owens in the 1936 Games at Berlin, but Jesse was favored by a wind.

The history of the champions in the 200 meters places added emphasis on United States' supremacy in the sprints. There was no longer sprint race in 1896 nor in 1906. In 1900 J. W. B. Tewksbury won in 22.2s., with Hahn winning the 200 meters in 1904 in 21.6s.

In 1908 R. Kerr of Canada was Olympic champion in 22.4s., with Craig winning in 21.7s. in 1912. Allan Woodring won in 1920 in 22s. flat, while Jackson V. Scholz equalled Hahn's Olympic record in 1924 when he won in 21.6s.

Percy Williams, proving his 100-meter conquest was no fluke, won in 1928 in 21.8s.; Tolan set a new Olympic record of 21.2s. in 1932 and this was further lowered to 20.7s. in 1936 by Owens.

All these times for 200 meters are for the distance around a curve, which is the official Olympic procedure for the longer sprint race.

In anticipating the results of these two sprints in the 1948 Games at London, it may be of interest to point out that, in the nine prior Olympic Games in which both the 100- and 200-meter sprints have been on the same program, in five instances the champion in the shorter race also duplicated in the longer dash. Four of these double champions were Americans, and one was a Canadian.

I have been fortunate to have personally coached a number of Olympic Games sprinters. Howard Drew, who made the 1912 team as a schoolboy, later ran for the University of Southern California. Paddock made the Olympic teams of 1920, 1924 and 1928. Frank Wykoff was another three-timer in 1928, 1932 and 1936. Charles Borah made the Olympic sprint relay teams in 1928 as did Foy Draper in 1936.

Now I am hopeful that Southern California may again be represented by a champion sprinter developed during the pre-Olympic season of 1947, Melvin E. Patton.

(Continued on page 62)

# Once Again...

The



## MEET SHOE

Such a superb track shoe hasn't been made for the past five years! Now, a limited quantity are again available.

The Spot-Bilt No. 732 Meet Shoe is hand turned, beautifully made from yellow back kangaroo on a newly developed last that ensures perfect fit and balance.

It is a meet shoe, with permanent spikes, "light as a feather," and designed for speed, the kind of shoe that helps make new records.

Also available are standard No. 707 Track and No. 717 Field and Jump Shoes with detachable spikes, favorites for indoor and outdoor use, made with Spot-Bilt's famous quality construction.

ASK YOUR  
**SPOT-BILT**  
DEALER

**SPOT-BILT, INCORPORATED • 1635 AUGUSTA BLVD., CHICAGO 22, ILLINOIS**  
SINCE 1898 • MAKERS OF THE FINEST IN ATHLETIC SHOES



# Play of the End in the T Formation

By Tom Lieb  
Assistant Football Coach, University of Alabama

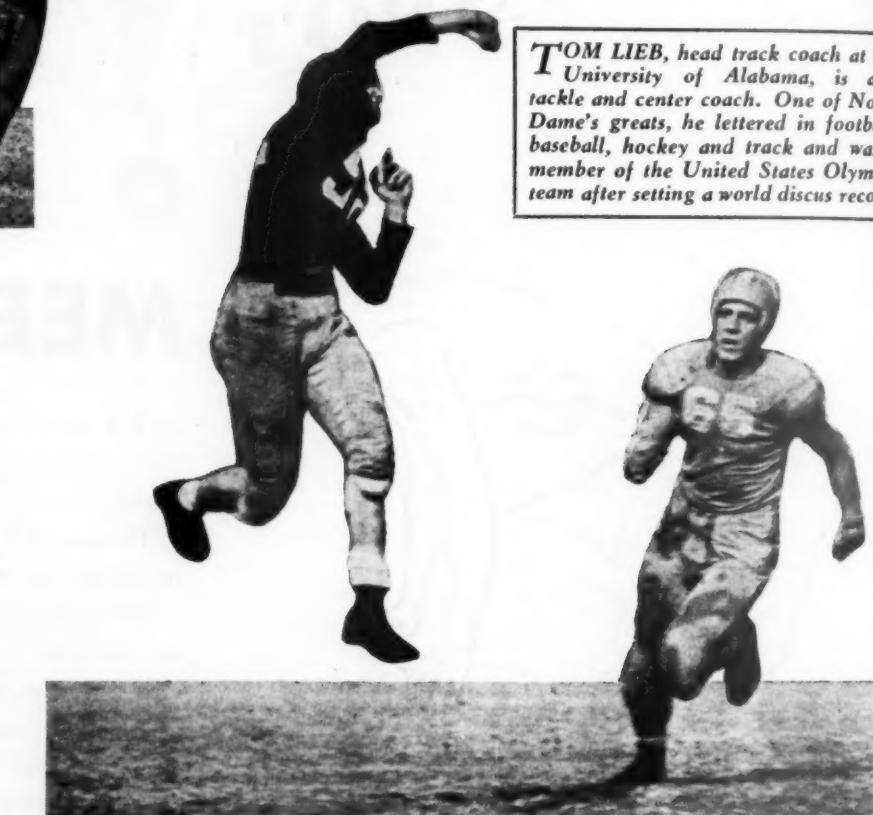
**TOM LIEB**, head track coach at the University of Alabama, is also tackle and center coach. One of Notre Dame's greats, he lettered in football, baseball, hockey and track and was a member of the United States Olympic team after setting a world discus record.

HERE is no position in the line, the playing of which has changed more in the past ten years than that of the offensive end. The technique and variations necessary to play the position successfully are seldom combined in one man. Formerly the physical build of the end made little difference, provided that he had the ability to be a good blocker and tackler. With the recent advancement of the game, involving the forward pass, we now strive to have our ends of a more rangy nature and of a height of five-ten to six-three with natural ability to spring into the air above an ordinary opponent. If an end is short his ability in catching forward passes is lessened. He should, however, not be extremely tall because his ability then to block the tackle will be lessened. What we like to have is a man weighing 185 to 200 pounds, rangy in nature, with basketball instinct for handling the ball above his head, and with the speed and agility of a halfback to score after he catches a down-field pass.

The end must be rugged in order to block the tackle on offense; he must have speed enough to cover kicks well, and to break into the open to receive a pass. To play end requires a great amount of endurance, because often an end is called upon to go down for three consecutive passes, and on the next play to cover a punt.

Up to a few years ago the main qualification of an end was his ability to block the tackle and to be a vicious man on defense, but with the recent development and use of the forward pass, we find a trend toward the selection of our ends based on their ability to be pass-catchers, for with a great many teams, especially those using the T formation, throwing from thirty to forty passes a game, the end's biggest job is to receive passes or act as a decoy.

With the advent of the free-substitution rule, many coaches employ specialists for the type of play they want on offense and

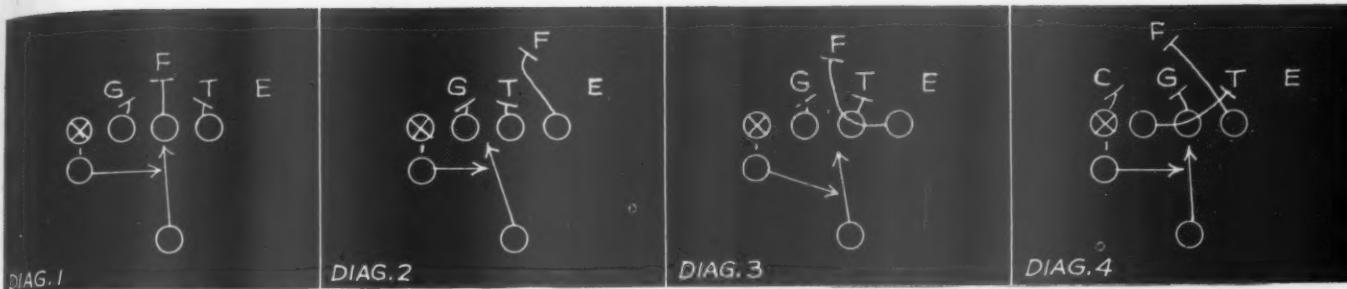


for the type of defense they use. We are going to see more and more substituting from the bench whenever a team changes from offense to defense or vice versa. One, very prominent coach mentioned to me not long ago that he was going to recruit several "goons" to play end on his team, meaning that he would have some ends just as pass-receivers and they would be six feet, six or more in height. Then, when his team went on defense he would change his personnel immediately, much the same as a baseball manager gets his left-handed batters out of the line-up when a left-handed pitcher comes in the box.

We have gone through an evolution of end play in the past twenty years. In the days of Rockne, his great pair of ends of 1921, Roger Kiley and Eddie Anderson, for example, were called upon to handle the tackle alone and they did a very good job of it. Then as offense changed and the Notre Dame coaches throughout the country found difficulty in finding end personnel that could handle the tackle alone, we set up a series of plays in which the wing-back helped the end box the tackle in.

During the past ten years, we discarded the principle of the end trying to handle the tackle alone. Now in the swing toward the use of the T formation, we find that we are back to the old system of having the end handle the tackle on many of the plays with no wing-back close up to help him.

We have found also that the hard work of rooting the tackle out of the way and moving him from one side to the other is not the T-end's job. We have developed what is commonly called a "screen" block and the end's duty is to obstruct or delay the tackle momentarily to provide protection on a quick-breaking play. In Diagram 1 we show the end screening off the tackle on the inside; he should hold him only long enough for the halfback on the hand-off play to get by the line of scrimmage. On this type of block with the tackle set in front of him or slightly to the inside or outside of him, the end, by knowing the snap signal, and moving quickly, can accomplish his task of delaying the tackle sufficiently for this type of offense. On the T formation he will block with his shoulder, generally above the belt of the



defensive tackle, rather than against his knees as in the old days.

In Diagram 2 against a close six-man defensive set-up with the tackle playing on the outside shoulder of the offensive tackle, we run the same type of hand-off play. Here the tackle blocks the defensive tackle out, and the end switches assignment with him in screening the fullback. Again the block is high, and the end should try to get his body on the inside of the fullback so that the ball-carrier will be free to cut to his left.

In Diagram 3 we find the end again blocking on the fullback, but if the fullback is playing the gap between the guard and tackle, the best way for the end to get him is to pull behind the tackle and go straight into him. On this arrangement we have the tackle and end constantly in communication with each other and by signals indicate the type of block they are going to use. If the end is pulling behind the tackle, we have the tackle charge first with his outside foot, and then the end can step first with his inside foot, and little difficulty will be experienced by either tackle or end in accomplishing their blocks as the play must be quick, and there is no time for the end to be moving laterally.

In Diagram 4 we have a situation in which a team is playing a 7-man defensive line with the fullback in toward the center of the line, and the defensive guard playing too wide for the offensive guard to take him in. Against this defense the end can handle the tackle *out* very easily, but the defensive fullback must be taken care of, and oftentimes we run the play as diagrammed with the end going quickly for the fullback and the tackle taking the defensive guard with the offensive guard pulling out to cross-block on the tackle.

With these four variations it may be seen that the T formation has many combinations in blocking to meet most any type of defense. The end is not always found blocking the tackle, as he has been before the T popularity. In Diagram 4 I have found that the end can aid himself in getting out and avoiding the tackle by going on his hands and knees the first yard or two as he has a good angle on the defensive fullback, but he must get to him and not be held by the tackle.

On the outside plays, commonly called "pitch-out" plays, the end goes out to block the defensive halfback, and to accomplish this block he must first get away

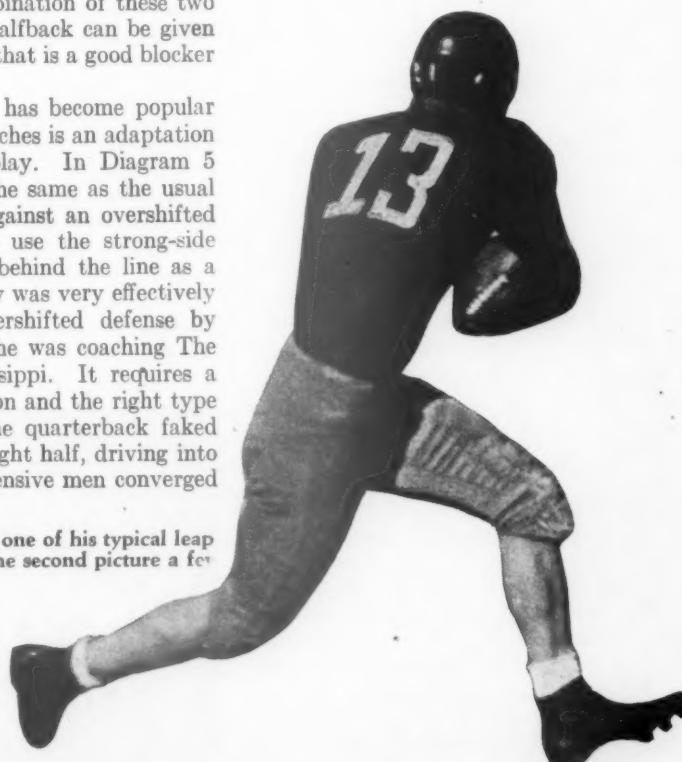
from the tackle then make a right-angle turn to the side line and get to the halfback quickly. We want him to block the halfback before he can come up to the line of scrimmage. On this block we have him put on a shoulder block from a running position, staying on his feet and getting close to his opponent before he attempts his block. When he gets about a yard from his opponent he will know whether to knock him *in* or *out* and the ball-carrier must run according to the end's block. A good combination with this block is to have the end jolt the defensive halfback with his shoulder and then go into a side-body block to take him out of the play permanently and prevent him recovering to make a tackle.

Many coaches have a forward-pass play that looks exactly like the pitch-out and run. On the pass play the action of the end is almost the same as on the running play. He goes parallel to the line of scrimmage, fakes a block on the halfback, or goes to the ground, making the halfback think that there is to be a running play, only to have him charge in on the passer. In the meantime the end, recovering to his feet, either takes a spot pass or goes down the field deeper to receive the pass. With the combination of these two plays the defensive halfback can be given a bad day by an end that is a good blocker and good faker.

Another play that has become popular with T formation coaches is an adaptation of the end-around play. In Diagram 5 the set-up is much the same as the usual hand-off play, but against an overshifted defense, some teams use the strong-side end coming around behind the line as a ball-carrier. This play was very effectively used against an overshifted defense by Harry Mehre when he was coaching The University of Mississippi. It requires a great deal of deception and the right type of ball-carrying. The quarterback faked his hand-off to the right half, driving into the line, and the defensive men converged

to stop the play with the fullback and left half breaking to the right as if the play might be a pitch-out. It is easy for the end who delays a count to come behind the quarterback and take the ball with both guards pulling out, one to block the end *out* and the other to take the linebacker. The play has a great deal of merit.

The pass-receiving duties of the offensive end must be considered next. Some coaches position their linemen close together. Others have the linemen spread apart from each other, but the most popular variation is to have the guard and tackle close together and the end spread about a yard and a half from his tackle. From this set-up it is not difficult for the end to carry out his assignment in any pass pattern unless the defense definitely puts a man in front of him to prevent him from getting out. To avoid any hold-up of the pass-receiving end, some T coaches play one end five yards out from his tackle. From this position the end has a variety of possibilities. He may act as a "flanker" blocking *in* on the fullback or on the defensive end; he may take a spot pass on the line of scrimmage, go down and



Harry Gilmer starts one of his typical leap forward passes. The second picture a few seconds later. The pass safely caught by Rebel Steiner nets thirty-five yards.



In Illustration 1, the offensive end is about to catch a pass. Notice his body is extended, his eyes are concentrated on the ball, and his hands and arms are extended up, not tense, reaching to catch the ball well over his head.

take a hook pass, or enter into any pass pattern that his team uses. I believe the wide set-up is used for two reasons—to cause the secondary defense to make an adjustment to cover him or to put him in a position where he cannot be held up by the defensive tackle. This variation of a wide offensive end is very popular with the professional teams as they often have exceptional pass-receivers and will sacrifice a little offensive running strength to get their "stars" loose for passes. To be a good pass-receiving end, he must have more than a good pair of hands. He must have the necessary speed to get into the open and beyond the defense. He must have the usual stunts of change of pace and change of direction that will aid him in getting open. The pass-receiving end must be a good faker. He must have ability, when serving as a decoy, to draw the attention of as many defensive backs as he can to provide an opportunity for his team mates to get open. On the other hand, when he is going out for a pass, he must fake his intent.

By the hook pass, which has been called a great many names by different coaches, I mean the play in which the end goes down toward the halfback and then turns around quickly to face the passer. On this type of pass an offensive end should pretend to the defensive back that he is going fast and going deep. He then suddenly



Illustration 2. The Catch. Here the end has the ball in his hands; his fingers are well extended, and he is concentrating on bringing it down.

Illustration 3. Getting under way. The end is bringing the ball down, still concentrating on it, and holding it in both hands while he gets up speed to score. Concentration on the catch will prevent fumbling and incompletions.

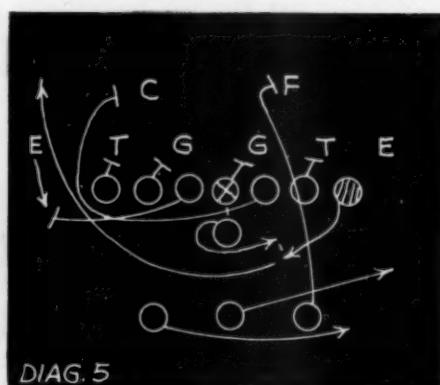


man that is covering him and of clearing the path for the other receiver.

This type of hook-blocking has made many short passes into long gains because the men acting as decoys have put themselves in good positions to take care of the defensive would-be tacklers. I believe that every pass pattern should have a number of decoys, but the coach should drill the men serving as decoys on hook-blocking rather than running the length of the field, hoping that the defense will follow them. Coaches who have a passer with ability to connect with any man who gets in the open and especially the deep-receiver probably will not use this type of offensive end play, but send him on down, relying on his passer to pick the open receiver. To the coaches who are not so fortunate in having that type of passer, I believe offensive ends may be used very effectively by decoying their men away from the spot of the designated receiver, and the decoys can take care of the deep defensive men after the pass is completed.

Pass-receiving from the T formation is no different from that in any other formation, but the offensive end with the various combinations of spacing can get into the open more easily.

On running plays from the T formation, the end on the side away from the play should be released immediately to block on the secondary. The difference between a four- and a forty-yard gain is having a couple of linemen break quickly down the field to take care of the secondary and the T formation provides this opportunity.



# Center Play and the Tall Pivot Man

By Herbert W. Read

Basketball Coach, Western Michigan College

Two years ago, at the National Basketball Coaches convention in New York, the heaviest argument on the floor of the convention was what legislation to adopt to curb the almost untrammeled physical performance of the giants of the hardwood. Such men as Kurland, Oklahoma A and M; Otten, Bowling Green University; Mikan, De Paul; Boykoff, St. John's University; and Schoen and Warneke, giants of the Valparaiso quintet, were dominating the scene, and with quite exasperating ease, were simply reaching over the heads of much smaller men to "dunk" or rebound the ball into the basket. There was some skill involved, of course, noticeably with Mikan, and Boykoff at his best, but still the main factor was palpably the ability to play up there in basketball's stratosphere.

It wasn't merely the loss of ball games through these almost gratuitous points that was serious. Only a few teams had the better tall men and a coach could concede a game or two to the inevitable and still have a successful season. But it still was a heartache for a coach to watch his own good boy of six feet, three or four, give out the best he had and still look helpless. Worse still, while the public was coming to see these giants play and accepted their performance with a kind of unthinking gusto, it was nevertheless a contingency to be reckoned with that even the good ticket-paying public would someday find the "dunking" monotonous.

So the coaches in that convention debated the matter. "Phog" Allen's twelve-foot baskets again came up for consideration, but again with little favor. While, undoubtedly, the giant would have a little more trouble in negotiating these, they would be pushed much too high up for the small man, and they surely would have brought an undesired differentiation between high school and college equipment and play. Besides, one of the thrillers of basketball, that fast basket shot by a dribbler, when driven hard by his guard, would be almost impossible. It takes expert timing to get this one in and with the basket two feet higher, the arm reach would not be equal to the task.

Much thought and debate were given to changing the width of the free-throw lane to get the big boy farther away from the basket under the operation of the three-second rule. The suggested changes followed mainly three patterns: the keyhole one in which the width at the end line was made twelve feet, connecting up with the free-throw circle at the present lane points; the tangent lines that came straight from the free-throw circle's diameter to the end line; and the semicircle based on the end line which reached a point eight feet in front of the basket. Finally, it was decided to make no changes in the floor pattern at that time, but to work another year on defense techniques to see if the curbing of the big boys' scoring could not be accomplished without special legislation. I had a suggestion on the floor at that time for defensive play which worked

out rather well against a 6-foot, 11½-inch center, (this I will explain later in this article), but Bruce Drake, of Oklahoma, said, "What are you going to do when the eight footers come into the ball game?" That seemed far-fetched at the time, but there is a 7-foot, 5-inch high school boy down in Mississippi who "dunked" many baskets last year, and somebody is thinking of going over to England and getting a boy named Palmer of similar stature to play against him.

In line with suggestions made that we might still do something towards curbing the effectiveness of the tall center without changing the pattern of the floor there are two main ideas: first, that we improve to the highest point possible the effectiveness of the smaller center; make him faster, more dexterous in his play around the basket, and give him the stamina that will enable him in the closing minutes of the game to "play rings around" his taller and tiring opponent; second, that we systematically use the co-operative play of team mates to help him, which may involve special formations defensively.

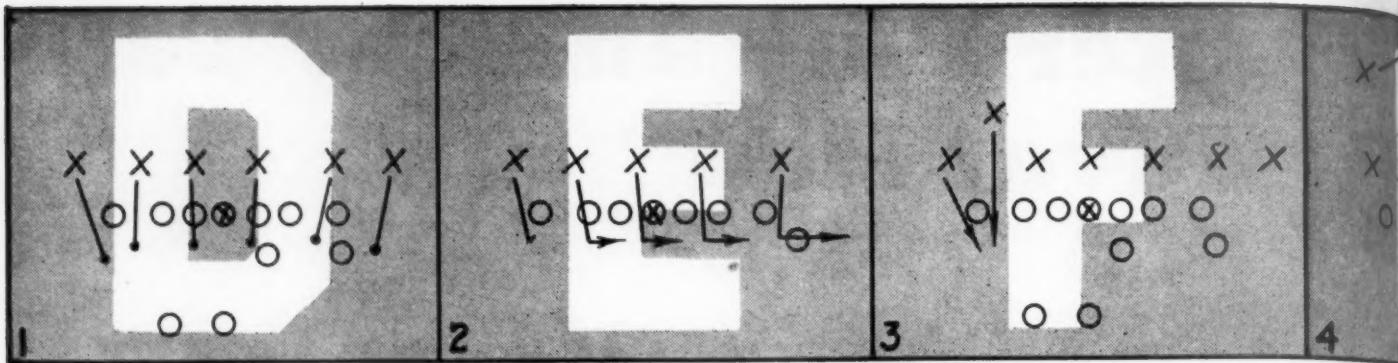
Coaches, of course, have through the years, worked on the development of their pivot men. What I have to say here may not be entirely new. However, I believe the organization of this work may be, and the title I choose to give it, the education of a pivot man.

This education resolves itself into five steps: 1. Handling all types of passes. 2. Pivot play under the basket. 3. Fast cut in for a "dog" shot. 4. Rebound work. 5. Pass drill to team mates.

To work out the first step, I place the center just ahead of the free-throw line in one of the positions he will later take in a game (Diagram 1). Standing from fifteen to twenty feet away, and shortening the distance as his skill improves, I throw all kinds of passes in to him, push, catcher's peg, overhand hook, underhand, side hook, cross-fire, backhand, and bounce. I "ride" the ball in pretty hard, telling him to get his hands well out to meet it, then "give" slightly with them to cushion the shock. Men at first will tend to bring their hands back into the body as in taking a football. In this they must be checked. The trick is to handle the ball away from the body. A mental slant comes in here. Centers with whom I have worked have told me that they felt at first they could never handle the balls "powered" in there, but ultimately found they could. The theory back of all this is that not only does the center become more adept at executing plays, but his team mates

(Continued on page 34)





## for the TEAM

**I**N MAPPING our plans to meet a particular team our first consideration is with the style of offense our opposition will employ. We are also very much interested in the manner in which our opponents return punts, and their style of pass defense. We are perhaps more interested in the personnel of the opposing ball club than anything else.

We like to use a six-man line with its many innovations as a basic defense. If we are to defend against a single-wing formation, it is very important that we know where the team is most dangerous. If the ball club has a dangerous tail-back, we think of overshifting to the strong side. If the tail-back is not very fast, but the opposition is fortunate in having a fast, dangerous wing-back who is very dangerous on reverses, we think about a balanced six-man line. Then, of course, we consider the strength of our opponents' passing and quick-kicking games and design our defense to stop what they can do best.

### Defensive Line Play

There are four principles which we give our boys in teaching defensive line play. We try to impress upon the defensive linemen that there is nothing quite so important as control of the line of scrimmage. We emphasize to our defensive linemen that there are four objectives for which they must strive if our defensive line play is to stand up.

The first objective is to charge across the line of scrimmage as hard, viciously, and as fast as is possible. The men are to charge entirely across the line of scrimmage and at definite spots assigned to them. Diagram 1 illustrates the spots to which the defensive linemen will be assigned when the team is using a six-man line against a single-wing formation with a balanced line.

The second objective for each lineman is to protect a definite territory assigned to him. Of course, the lineman must be impressed with the importance of getting across the line of scrimmage to the spot

assigned. He then controls a certain area near the place where he is located or on which he is located. This area must not be more than he can normally control.

After protecting the territory assigned him, the third objective is for him to go for the ball-carrier. It is most important that the linemen know that their first duty is to get across the line of scrimmage, then protect their own territory before driving for the ball-carrier.

Finally we expect the defensive linemen to try to make the tackle. Without the first three principles of defensive line play, this last objective is impossible. Without the last principle, however, the first objectives are useless. All are of equal importance but should be accomplished in the order given.

After arriving at their respective spots in their initial charge, linemen will often protect their territory and then drive at the ball-carrier at the wrong angle. On wide plays, linemen often trail the ball-carrier at a dangerous angle, making it possible for the six defensive men to be separated to such an extent that cutbacks are very dangerous. Diagram 2 illustrates the paths which the linemen should take in defending against a wide play. Linemen make costly mistakes in trying to break through the line and throw the ball-carrier for a big loss. It is more important to hold the offense to short gains and keep the first line of defense intact so that no openings are permitted. The most important rule in football is that the offense must make ten yards in four downs to retain possession of the ball. Too many times a lineman will try to throw a back for a loss permitting him to make a long gain. It is much more important to hold the opposition to short gains so as to acquire possession of the ball by receiving a fourth-down punt.

There are four "Cant's" in football which we stress to our men. First we can't have a punt blocked; second, we can't have a pass intercepted; third, we can't allow a long run by pulling out of position; and fourth, we can't fumble the ball. In many instances long runs result

from over-anxiousness on the part of our players. It is very important that the defensive linemen defend his bit of territory until he knows that the play cannot come back over it.

It is important that we know how to defend against the opponents' passing attack and their punt returns. We gave these two departments much consideration in preparing to meet Tennessee last year. They had a very dangerous punt return, and a fine passing attack.

Tennessee had an excellent left end in Hubbell. We feared their short passes over the center of the line that he was so adept in catching. To defend against the short pass over the line to Hubbell, we had both our right defensive end and right line-backer hold him up. In this manner we forced the receiver to take a certain route in going down under his pass and also held him up so that the timing of the pass was ruined. The plan worked pretty well. Diagram 3 illustrates the defense we used against Tennessee.

In planning a particular defense for a particular team, it is important to decide whether to stress rushing the passer or hold up the receivers. It is dangerous to rush a passer with the poise and the ability to run in a broken field possessed by Dodd of Texas A & M or Lane of Texas. It is always best to study the personnel of a ball club and set the defense to defend against what the opposition can do best.

We spend a great deal of time in a drill involving the entire defensive team. The defensive linemen are instructed to get across the line of scrimmage, control their territories, go for the ball-carrier, but are not permitted to tackle. The line-backers, halfbacks, and the safety man

(Continued on page 42)

### for the Team

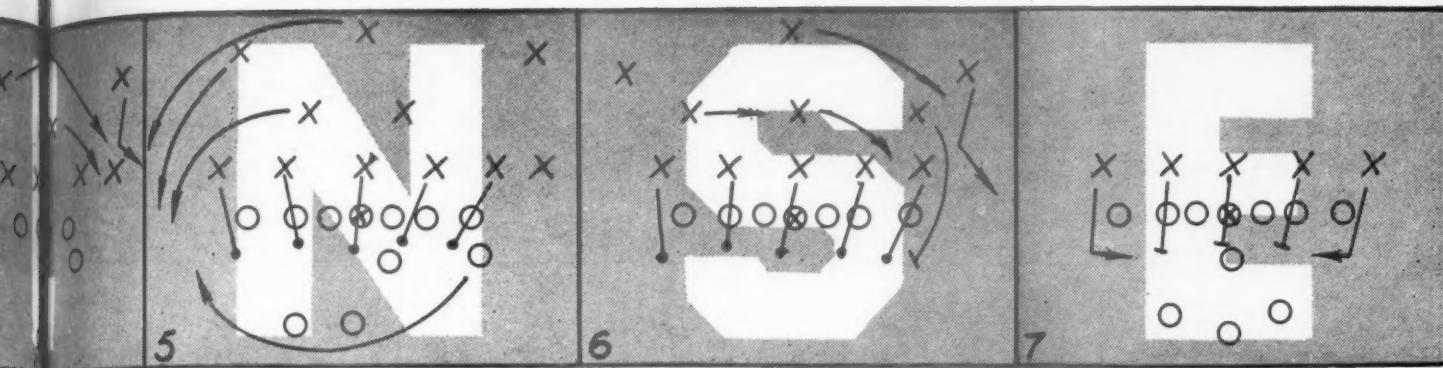
Jess Neeley, Rice Institute

### for the Individual

A. N. McMillin, Indiana University

### for the Army

Herman Hickman, U. S. Military Academy



## for the INDIVIDUAL

**I**N PRESENTING the subject of defense, I will first take up the subject of defensive play of the individual positions.

### End Play

I used to take a great deal of pride in our defensive end play after I had taught each one to play both a smashing and a normal style of play. If the ends could protect both from the inside out and from the outside in during the same game, I thought that I had a great end. Now, an end cannot do a good job unless he can do all these things that we used to expect of him, and, in addition, back up the line. As we line up in a regular six-man line against an offense today, we do not know just how the end may have to play his position. The left end may be expected at times to smash into the backfield with power of a bulldozer. He might do two or three things in defending his position. He might be expected to play a waiting end, awaiting developments, going in if the play goes in, and going wide if the play develops wide. Or, he may be expected to be a drifting end, going across the line with a couple of steps before forcing the interference wide, being ready to break for the ball-carrier when the opportunity presents itself.

The defensive end should never let a flanker block him in. I often have my defensive end back up the line when encountered by a flanker. The defensive end should always play the flanker when approached by the flanker. If the flanker comes at the end, he should play him. If the flanker stays in position, the end should drive into the backfield as fast as possible.

**T**HE accompanying articles are reports of the presentations made on defense at the coaching schools of the Texas High School Coaches Association and Connecticut University, Otis Coffey, High School, Douglas, Arizona, reporting for the former, and Walter Hellmann, Roger Ludlow High School, Fairfield, Connecticut, for the latter.

The initial stance of the defensive end is not too important. It is important in meeting a blocker that the end have his inside knee forward. If the end is meeting a blocker from his right side, his right knee should be advanced when contact is made. His left knee should be extremely flexed and his right shoulder and forearm be over his right knee meeting the blocker with a hard charge from underneath upward. In defending against a single-wing formation, the right defensive end, in most instances, should defend from the outside in. On the other hand, the left defensive end should defend from the inside out. He should direct his charge at the tail of the wing-back. If the wing-back blocks the tackle, the left end should go on in. He should meet the on-coming blockers with a shoulder bounce if the play does not develop to his inside. His main responsibility is to protect from the inside out.

In defending against the T formation, the work of the defensive end is made even more difficult. When the optional off-tackle and end-run plays are encountered without a man-in-motion, the end should be made responsible for either the wide play or the inside tackle but not both. It is also well to give the guards and tackles definite assignments with respect to their responsibility. Give them either inside or outside responsibility, not both.

### Tackle Play

Before the development of the modern T formation, our biggest linemen were used at the defensive tackle slots. This was particularly effective against the end wing-back style of offensive play. Now we find the defensive tackles must be very agile players who must react instantly and quickly to meet quick-opening plays and deceptive counters. We consequently have moved our guards out to the defensive tackles' positions and have moved our large offensive tackles to the defensive-guard slots, when employing a six-man line against a T formation. On the other hand, when we meet the single-wing style of play, we have to move our defensive

men back to their original positions.

Against the single-wing style of offense, we like to have our strong-side tackle drive into the offensive end from a very low position, meeting the end with the forearm and shoulder, driving him back into the backfield. If a forward pass develops, I want him to rush from the inside out. If the play develops wide, the tackle should have driven the defensive end into the path of the interference and should bounce back to help protect against the wide play.

### Guard Play

We have found it beneficial to put our guards in front of the offensive ends and the big defensive tackles in front of the offensive guards when playing against the T formation. During this period of changing defenses, we have found it necessary to teach our guards not only defensive end play but also defensive line-backer play.

We spend twenty minutes three times each week in teaching our guards to defend against traps. We like to have our guard drive into the trap-blocker with all the power at his command and try to drive the blocker back into the path of the ball-carrier. We do not ask our guards to fall to a four-point position and meet the play from the inside when a trap is indicated. We want them to drive into the blocker with plenty of determined power.

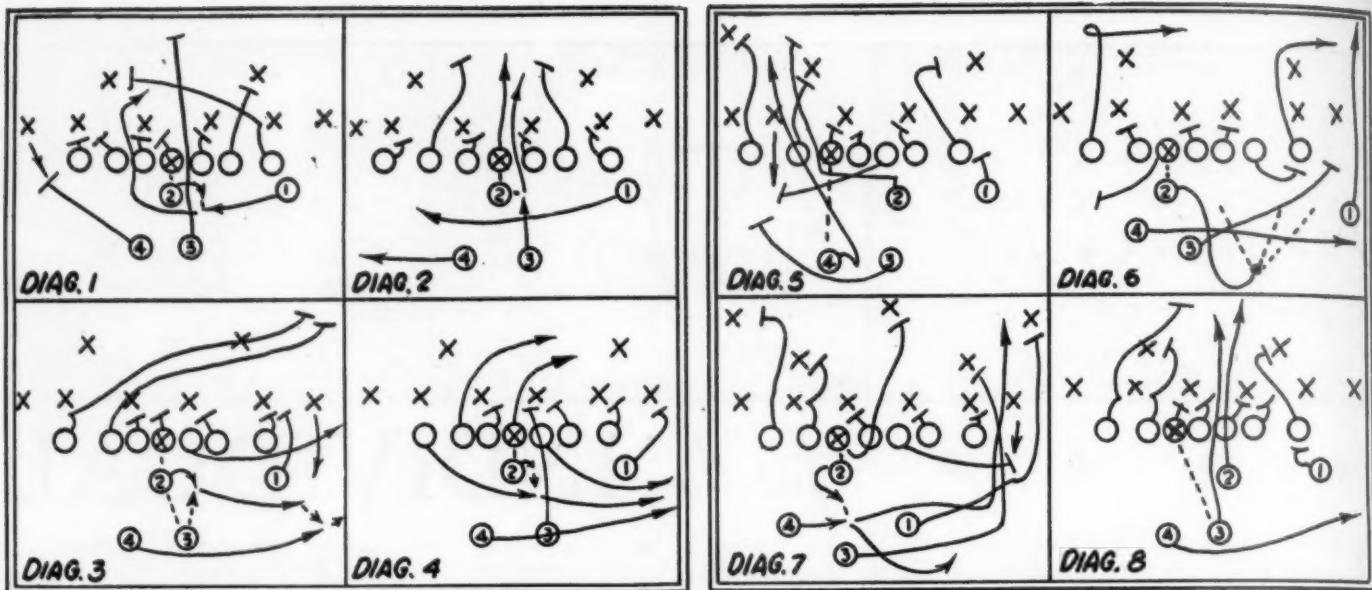
Diagrams 14, 15 and 16 illustrate three defenses which we use against a single wing-back formation.

In defending against the Chicago Bears and their T formation with a group of All-Stars in 1943, I used an angling style of line play. We lost the game, but I believe the defense is a pretty good one. We angled only three linemen at a time.

Diagram 17 illustrates the defense we employed against the Bears' attacks.

The left tackle drove over the offensive right end to protect the inside. He was very careful not to be blocked inward. The left end played a very strong game except when a pass was indicated. The left de-

*(Continued on page 44)*



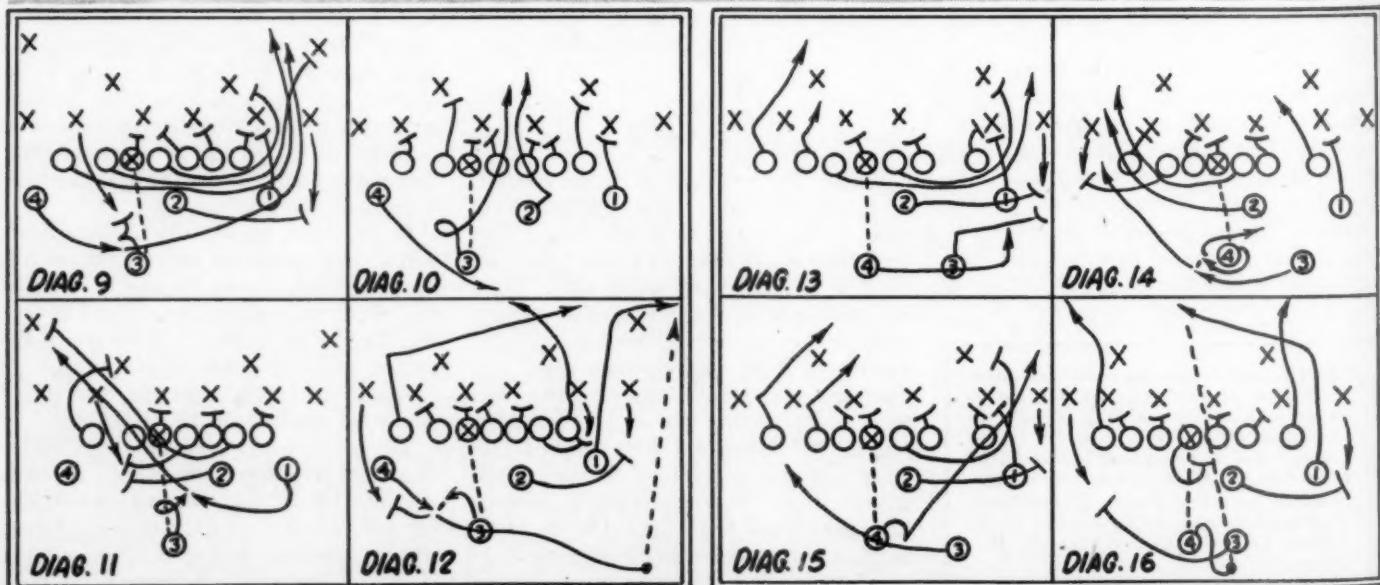
Single Wing  
(Balanced Line)

**COMBINING**  
*the*  
**FORMATION**  
*with*

Single Wing  
(Unbalanced Line)

Double Wing

The Box



## Single Wing (Balanced Line)

By Tom Bulkley  
Sabetha, Kansas, High School

WE USE a combination of the single wing and T formation. Diagram A shows our line-up for the T with 1 on the wing. As shown in Diagram B, the quarterback shifts to the right and we run from a single wing. The quarterback takes his position behind the center when we come from the huddle and shifts on the signal counts. We play a balanced line with ends split a yard. The wing-back is out and back one yard and 3 and 4 are back four and a half to five yards and spread one yard.

Diagrams 1—4 and 17, illustrate some of the plays that we use.

In the play shown in Diagram 1, an inside tackle on a reverse, 2 fakes to give the ball to 3 who drives through the line, but gives the ball to 1 who goes inside tackle. In Diagram 2, the quarterback fakes to 1 and hands-off to 3 who goes over center. In Diagram 3, the ball is passed through 2's legs to 3 who gives it to 2 starting around end. We do not block the defensive left end out, and as 2 is about to be tackled he laterals to 4.

In Diagram 4, the quarterback fakes to hand the ball to 3, who drives through center, but gives it to the left end who takes it around the right end or off tackle, depending on how the defensive left end is blocked.

In Diagram 17, the quarterback shifts and the ball is passed direct from center to 4 who goes off tackle in a straight wing formation.

## The Single Wing (Unbalanced Line)

By Vic Dorris  
Kenton, Ohio, High School

SOME coaches use the balanced T and the unbalanced single-wing system, the combination of which necessitates a shift of both the linemen and the backfield. Others operate from the balanced T and balanced single wing. In this case, only the backs shift.

We use the unbalanced T and the unbalanced single-wing. The backs shift either right or left as we line up. The players on the strong side always line up in that manner to either side. The man-in-motion and flanker are used from both formations to either side. We use no brush blocks but instead, we teach and practice the same technique and skills for the T as we do for the single wing. Ninety-five per cent of our blocking is the plain old-fashioned shoulder block. We have the same number of plays for both formations

**T**HIS article is a continuation of the replies received from the follow-up to the nation-wide high school poll on football systems. As in the September issue, an attempt has been made to select articles from different sections of the country. The selection of a series of plays from each writer, although in some cases there is a duplication, provides a better presentation than a hit-and-miss selection.

but in a game we use ninety per cent T and ten per cent single wing or vice versa.

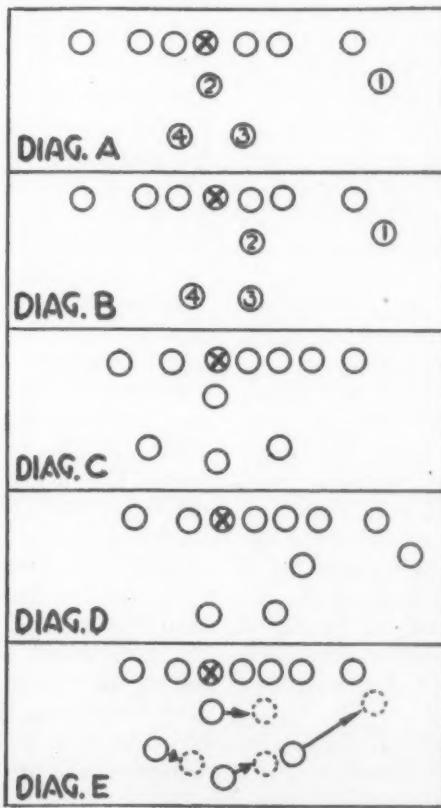
We line up from the huddle in an unbalanced T right or left. We either run from this formation or shift to a single-wing, our backs only shifting. We try to get the first step of our shift perfect so our opponents hesitate for a moment to see whether we are running off the T or shifting into a single wing. We send any of our four backs in motion or as a flanker. Diagrams C, D and E illustrate our backfield shift.

Diagrams 5, 6, 7, 8 and 18 show some of the plays that we use from the two formations. Diagram 5, a trap from the single wing; 6 a pass by the quarterback. Diagram 7 is an off-tackle play from the T. In Diagrams 8 and 18, a fullback buck, the blocking is identical for the plays run from the T and single wing.

## The Double Wing

By Clary Anderson  
Montclair, New Jersey, High School

WE COME out of our standard huddle and move into either the "split-



T" or close double-wing without any unusual shifts. The two offensive patterns blended well for us and we won our nine games. There was no way of knowing which would work the better and we were pleasantly surprised to find our boys could handle each with no particular confusion. A sequence of plays from the double-wing is shown in Diagrams 9-12 and a sequence from the split T is shown in Diagrams 19-23.

Diagram 9, an off-tackle reverse. Diagram 10, a full spinner. Diagram 11, a weak-side reverse. The fullback fakes, keeps spinning and hands off to the right halfback. Diagram 12, a reverse pass. Diagram 19, a quick-opener. Diagram 20, a counter with trap. Diagram 21, a fullback buck. The quarterback fakes a quick-opener, pivots and hands off to the fullback going over center. Diagram 22, an end run and Diagram 23, a forward pass from a fake end run.

## The Box

By John W. O'Connor  
Laconia, New Hampshire, High School

IN WORKING the combination T and Notre Dame box formation, we start our line-up position from the T, and with a "hike-go" signal we are able to execute a fast-breaking offense of any T play wanted. We use this to take the defense by surprise when they have adjusted themselves to our basic offensive plays which are from the Notre Dame box.

With the box formation the quarterback calls signals and if the defense gets careless waiting for those signals we use the T on "hike-go."

Our basic formation is the Notre Dame box and our power lies in the use of this formation. Add to this, the possibility of using a series of long-count plays from the box and the defense soon learns it has to watch the ball.

Diagram 13 shows our Notre Dame box basic off-tackle play for sure gains.

Diagram 14, shows one of our best ground-gainers from the Notre Dame box, a half to full reverse, the fullback carrying the ball back to the weak side. Cross-blocking on defensive end and tackle.

Diagram 15 is a check play on the play shown in Diagram 14. The fullback fakes a reverse. The left halfback keeps the ball and goes off-tackle to the strong side. The quarterback blocks the defensive left end.

Diagram 16 is a pass play from the same action.

Diagram 24, a quick opener by the right half. The three backs fake a step to the right, then cut back to the left. The right half receives the ball from the quarterback and follows his own right tackle. Other backs continue their fakes to the left.

(Continued on page 18)

# The ATHLETIC JOURNAL

Nation-Wide Amateur Athletics

Vol. XXVIII

October, 1947

No. 2

Published by

THE ATHLETIC JOURNAL PUBLISHING CO.

6858 Glenwood Avenue

Chicago 26, Illinois

MAJOR JOHN L. GRIFFITH

Founder

JOHN L. GRIFFITH

Publisher

## Football As the Public Sees It

THE tremendous attendance at football games last year and the announced sell-outs at games for this year would seem to indicate that the American public had a pretty good opinion of school and college football.

The *Des Moines Register* through its very authoritative column, "Iowa Poll" ran an interesting survey among the residents of Iowa. Iowa is a very representative state having as it does both farming and manufacturing, large cities, small towns and rural areas.

Iowa citizens indicated that 80 per cent had seen a high school football game. The breakdown between city, town and farm was practically identical with the total, being 82 per cent, 78 per cent and 79 per cent respectively. The per cent having witnessed a college game was slightly less than half, as follows: city, 53 per cent; town, 46 per cent; and farm, 38 per cent; with the total 47 per cent.

The "Iowa Poll" then sampled the opinions on the question, "If you had a physically fit son in high school, do you think it would be a good or bad thing to have him play on the high school football team?" The answers were broken down as follows: Good from the cities 74 per cent, bad from the cities, 14 per cent; good from the towns 71 per cent, bad from the towns 19 per cent and good from the farms, 61 per cent, bad from the farms, 23 per cent. Thirteen per cent were undecided. The less favorable response from the farm areas may be traced to the fact that in many instances the local school is too small to include football and, therefore, the advantages of football are not readily available to those in those areas. Specifically, Iowa has 1072 high schools of which 324 have inter-scholastic football.

Iowans who thought football was good were then asked, "In what ways do you think football is good for high school boys?" Eighty-one per cent thought

football builds up bodies and teaches fair play. Requires study and good grades was answered by 6 per cent while 2 per cent thought football was good because it afforded good recreation and 1 per cent said that football cut down delinquency. Ten per cent were indefinite in their replies. The opinions of those residing in cities, towns and on farms were pretty much in accord with the total summary above, except that only 73 per cent of the residents of towns felt it was good because it built bodies and taught fair play. On the other hand, 11 per cent of those questioned from towns felt that it required study and good grades.

Those who said football was bad were asked, "In what ways do you think football is bad for high school boys?" Two answers garnered the most of the opinions. Seventy-five per cent felt it was too dangerous and 12 per cent said it was not necessary. Only 4 per cent indicated other answers such as: makes boys conceited, not enough training and makes boys tough. Nine per cent were indefinite in their replies. It is also interesting that the city dwellers were definite in their dislikes of football, only 3 per cent giving an indefinite answer. Those in towns were not so sure, with 16 per cent being indefinite.

Football is today at the height of its popularity, both from the point of number of schools participating in the sport and in the eyes of the public. The state high school offices, the National Federation, the manufacturers and the schools themselves are making tremendous strides in lessening the principal objection to football if we may judge by that poll and that is the injury element.

## An Assist to the Columnists

ONE major institution follows the practice of not revealing the scholastic deficiency of any of its students. When an athlete bumps into scholastic difficulties and is ineligible to play, it is announced to the press that so and so will be lost to the team for the season due to a torn cartilage or similar injury. While this practice is admirable in that it protects the individual in the eyes of the public, it nevertheless serves as the basis for much of the adverse criticism that athletics receive.

Many grouch columnists have attacked school and college athletics by stating that preferential treatment is given to athletes in scholastic fields. At the time of the N. C. A. A. meeting in New York last January the sport columns were naturally filled with discussions of problems before that association. One columnist castigated school and college athletics and in the column stated in effect that half-backs must be terribly smart because he never heard of one who flunked. Unfortunately for the columnist, but fortunately for school and college athletics there appeared beside his column a news note with an Evanston, Illinois, date line which stated in effect that two members of the starting five at Northwestern University had been declared ineligible for the second semester because of deficiency in grades.

(Continued on page 63)



★ Capt. E. P. (Chink) Coleman, President of the National Junior College Athletic Association which has adopted the Spalding Last-Bilt as official basket ball for next year's National Junior College Tournament.

# 142 MORE COACHES NOW CALL IT "OFFICIAL"



• Coaches of the 126 Junior Colleges participating in next year's National Junior College Tournament and coaches of all the colleges in the Southern Conference have adopted the Spalding Last-Bilt as the official basket ball in all their league games.

Like other leading coaches throughout the country, they know they can depend on this ball for absolute accuracy and uniformity.

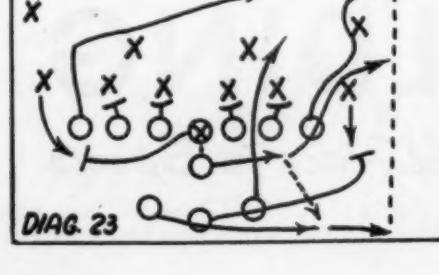
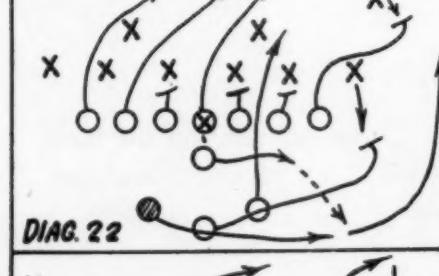
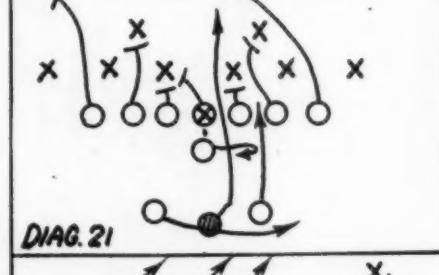
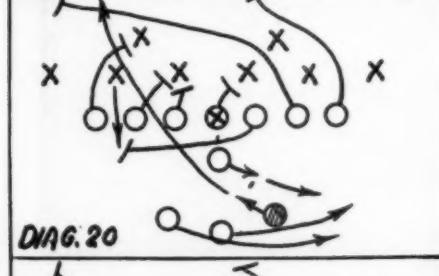
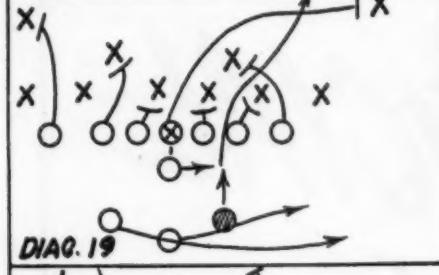
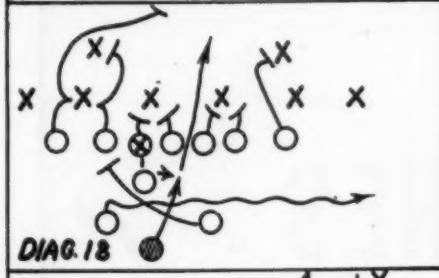
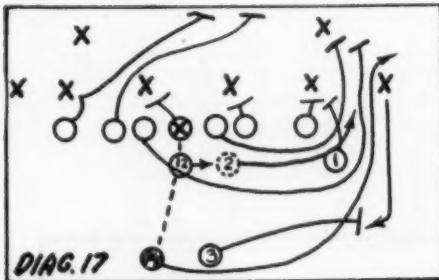
Built over a last that's a perfect sphere, every Last-Bilt is guaranteed for perfect roundness. That

means true flight . . . true rebound on the floor and off the backboard . . . with *every* Spalding Last-Bilt, *every* time.

# SPALDING

*Sets the Pace in Sports*

MEMBER OF THE ATHLETIC INSTITUTE



## Combining the T with:

(Continued from page 15)

Diagram 25 is a pass play from the action shown in Diagram 24.

### The Winged T

By Mike Caskey  
Bennettsville, South Carolina, High School

THE winged-T has been a most successful formation since I installed it in my school six years ago. We run from a balanced line with about eighteen to twenty-four inches between tackle and end. The wing-back moves to either side and plays as any wing-back. The two tail-backs are about four and a half yards back of the guards and assume a square stance parallel to each other. The quarterback takes the same spot as the quarterback in the orthodox-T. We get all types of plays off this formation, slants, cut-backs, reverses, double reverses, laterals and sweeps.

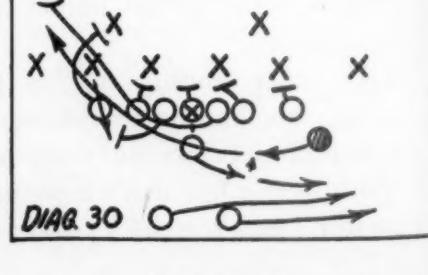
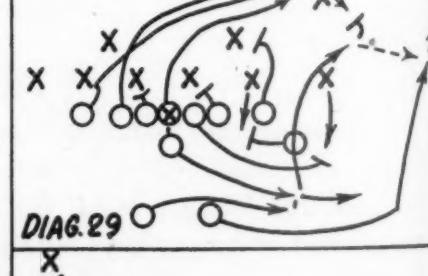
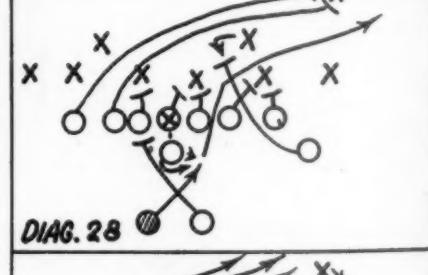
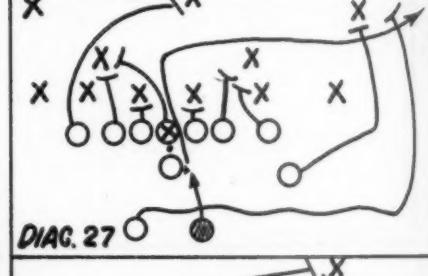
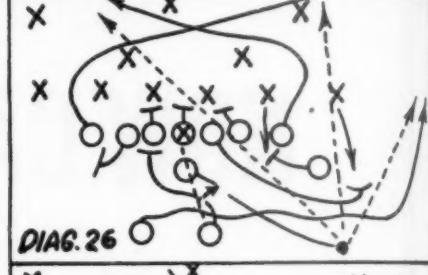
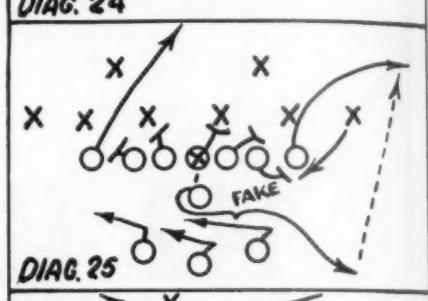
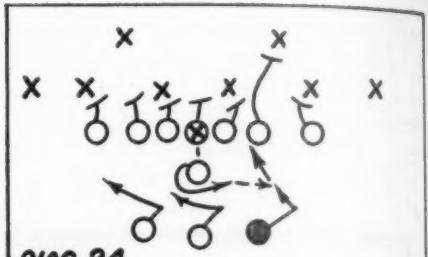
We number the holes in the defensive line and our blocking assignments are fairly simple. We use either straight shoulder blocks or cross blocks depending on the position of the opponents where the hole is. We base our plays on a six-man line with alterations in blocking assignments if we encounter a different set-up.

The quarterback rarely blocks but must be a good passer and ball-handler. He also handles the sweeps so speed is an added essential. We run our plays in sequence and have about eight plays in each. They look alike but hit differently. Any back may be in motion in either direction and as is evident the two tail-backs are the offensive men of the formation. Either back may pass or quick-kick but we always put our kicker and passer in the left tail-back spot.

Diagram 26. The ball is passed through the quarterback's legs to the right tail-back who fakes a plunge inside tackle but hands off to the quarterback who fades back and passes to any of the three men, usually the left end. The left tail-back is in motion to the right.

Diagram 27 is a quick-opener with either back in motion. The diagram shows the play to the right with the right tail-back taking a hand-off from the quarterback. When he gets through he cuts behind the downfield blocks of the man in motion and wing. The man in motion usually pulls the line-backer up on the right over far enough for the right tackle to get a good block on him.

Diagram 28. This is just the old cross-buck but still a good ground-gainer. The quarterback fakes to the right back and hands off to the left back who goes through



UNITED STATES RUBBER COMPANY  
SERVING THROUGH SCIENCE

feet in action  
Find

STAMINA

SUPPORT

SPEED



CAGER—A solid, speedy shoe designed for basketball—laces to toe for firm support through the whole foot.

with Championship Keds

SHOCKPROOF  
ARCH CUSHION



Only Keds Have All These Features:

- Scientific Last, allows full toe play
- Slanted two-piece tops; no binding
- Smooth inside construction
- Balanced toughness throughout
- Traction soles; non-marking
- Pull-proof eyelets
- Wash clean with soap and water

They're not Keds unless the name Keds appears on the shoe.

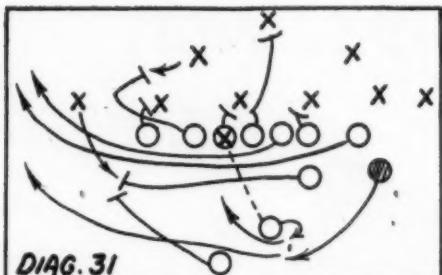
The power that drives through to win the game—the stamina your team needs to make an extra goal—often comes from alive, untired legs and feet—feet in Keds.

Keds Cushion Arch, famous for years, cradles every turn and twist of the foot in action, as though part of the foot itself. It actually moves with the foot.

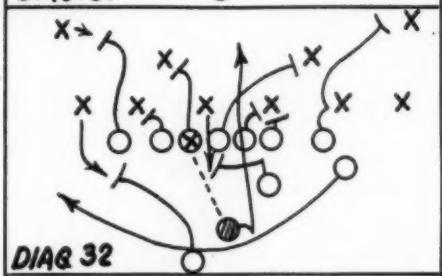
Traction soles, built for lightning quick get-away, or on-a-dime stops, relieve foot muscles of over-work, offset shock.

And in Keds, you'll notice the tops have a slanting cut—non-binding—you'll notice the smooth insides that don't chafe. In every way, your team of winners needs Keds.

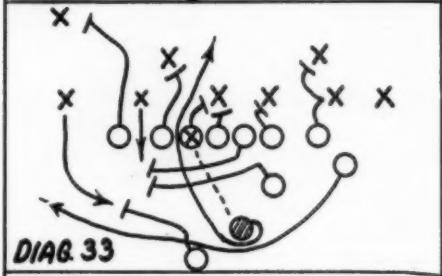
U.S. Keds  
REG. U. S. PAT. OFF.  
*The Shoe of Champions*



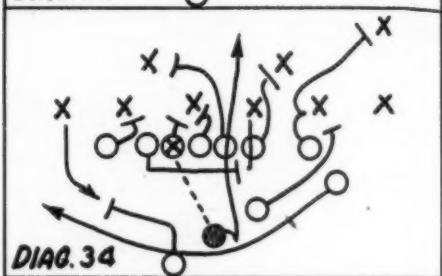
DIAG. 31



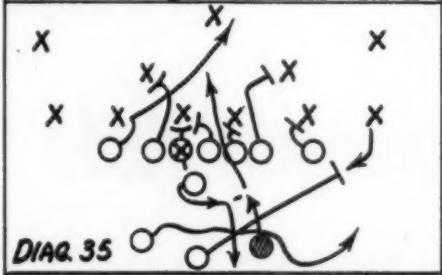
DIAG. 32



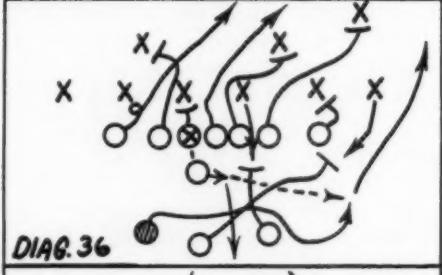
DIAG. 33



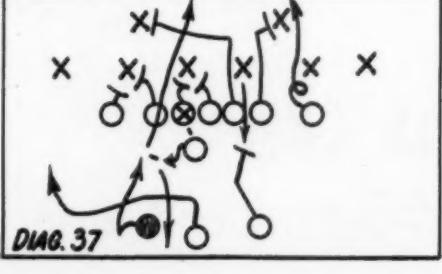
DIAG. 34



DIAG. 35



DIAG. 36



DIAG. 37

the tackle spot behind the block of the wing on the right line-backer.

Diagram 29, a cut-back with a lateral, develops from a fake sweep. The key block is made by the right guard, but the end is set up by the right back who fakes a block but continues around the end. The hand-off is made by the quarterback with his right hand. The right end moves out and across with the snap of the ball and gets a side block on the line-backer. The wing drives the tackle in with a shoulder block.

Diagram 30 shows a sneak reverse from a fake sweep. The center is the post for the drive blocks by the offensive tackles on the defensive guards. The left guard traps the defensive right tackle with the right guard leading through the hole. The left end drives the defensive line-backer in. The quarterback hands forward to the wing. No back is in motion.

## The Single Wing (Unbalanced Line)

By W. W. Campbell  
Middlesboro, Kentucky, High School

FOR the football coach who would like to use the T formation but hesitates to give up his old reliable single-wing the answer is, use both. We have used the single wing with unbalanced line since 1925. In 1943 we added the T with the line still unbalanced. That year we tied for our conference championship. In 1944, '45 and '46 we used an offense from both formations. During these three years we won our conference championship each year, winning twenty-three and losing five. In 1944 and 1945 we were the highest scoring team in Kentucky, in 1946 the second highest.

We set up our offense in the following manner. Out of the huddle we line up in the T with the line unbalanced to the right. We are ready to run from this or shift into the single wing. We are equipped with a complete offense from both formations. The one we use more often in any particular game depends upon the defense set up against us.

Diagram F illustrates our T formation. We are prepared to send any man in the backfield in motion or use him as a flanker. We also make good use of pre-shift plays without the man in motion. These, we try to get away fast. There is nothing unusual about our plays. We stress hard blocking and good timing.

The right end is separated one yard and the left end one and a half to two yards. The quarterback is positioned back of the seam between center and right guard. His right foot is slightly inside and against the center's right foot. He is crouched with his left foot back and heel raised. His hands are well up under the center. The back of the right hand is pressed

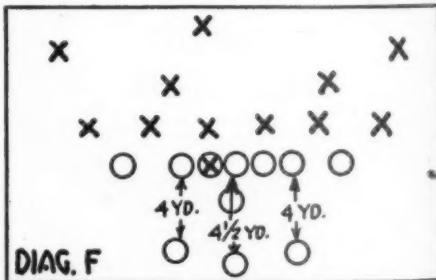
against the center's upper thigh with the left hand under, his heels almost touching. No fancy steps or spins are needed.

The shift from the T to the single wing, Diagram G, is on the count of three. The right half steps out with the right foot, does a long cross-over with the left, and hops to his position a yard out and a yard back of the right end. The quarterback steps back on his left, crosses his right and hops to his position one and a half yards back of the seam between the two tackles. The fullback takes a short cross-over with his left, a short step with his right, and a hop to three and a half yards behind the right guard. The left half takes his cross-over and steps toward the rear and hops to his position four and a half yards back with his right foot in line with the ball.

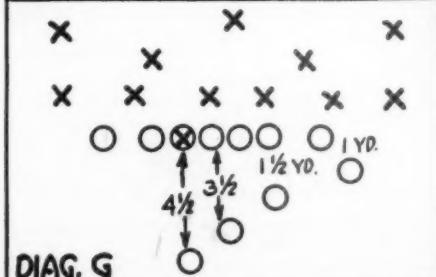
As a rule only one man pulls out of the line, the left tackle or the third man in from the right end. This man should be the best ball-player on the team. He must be as fast as any of the backs, very rugged, and a deadly blocker. Often he is used as a defensive back in a 5-3-2-1.

A four-play series from the single wing is shown in Diagrams 31-34. In Diagram 31, a wide reverse, the fullback hands off to the wing-back who goes wide around left end. Diagram 32. A trap on the right guard. Half spin by the fullback. Diagram 33. A trap on the right tackle. Full spin by fullback. Diagram 34. A trap on the left guard. Half spin by the fullback.

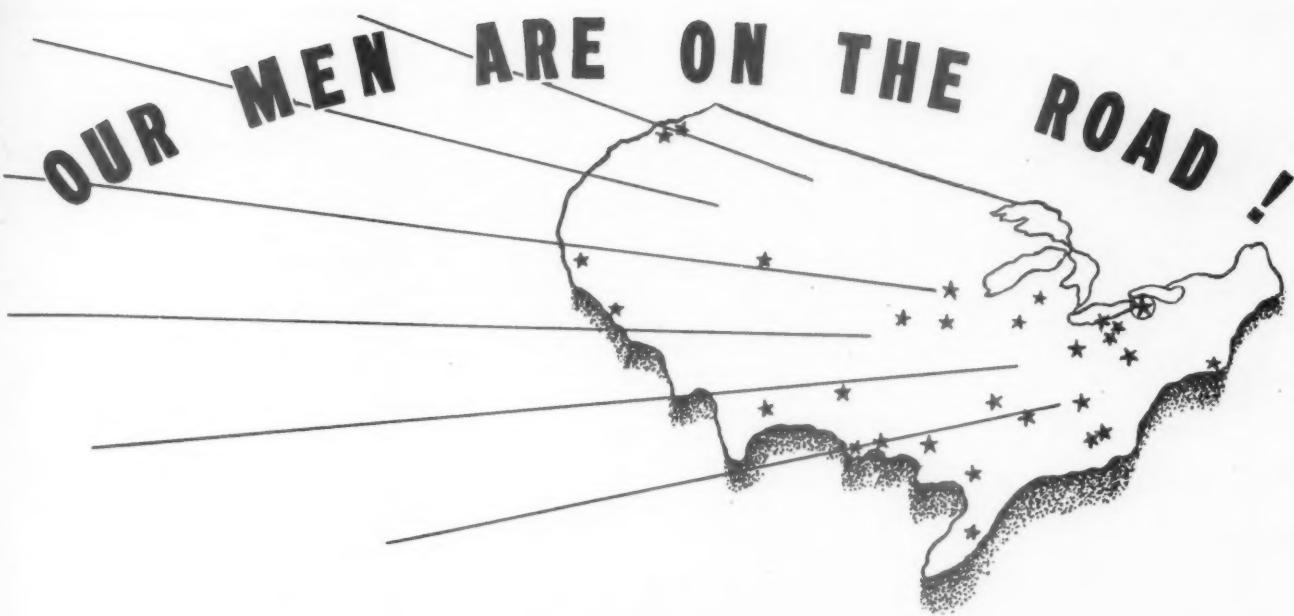
Four plays from the T are shown in Diagrams 35-38. Diagram 35. Quick opener, with the left half in motion. The right half takes the hand-off and goes between guard and tackle. Diagram 36. An end run. The quarterback fakes a hand-off to the right half who blocks the guard. The quarterback passes underhand to the left half in motion. In Diagram 37, the fullback is in motion. The quarterback hands off to the left half who goes between left guard and center. Diagram 38 illustrates



DIAG. F



DIAG. G



## OUR REPRESENTATIVE WILL BE CALLING ON YOU SOON TO DISCUSS YOUR EQUIPMENT RECONDITIONING NEEDS FOR THE COMING SEASON.

When MARBA'S representative does call on you, please "lend an ear" to what he has to say. He will explain to you exactly why you should make your plans NOW for the reconditioning of all your equipment as soon as the season is over. Football Gear and other equipment become easy prey to mildew and moths. Mud and dirt starts rotting and deteriorates equipment when it is not in use. Take our representative's sound advice and plan ahead to have MARBA recondition your equipment immediately at the end of the playing season.

## IF YOU DESIRE A REPRESENTATIVE IMMEDIATELY, KINDLY CONTACT THE ONE NEAREST YOU. HE WILL BE GLAD TO CALL AT YOUR CONVENIENCE.

**ALABAMA**  
W. A. May & Green  
23 South Court  
Montgomery,

Thoss Sporting Goods Co.  
76 Dauphin St.  
Mobile

**ARIZONA**  
Warren Brock  
156 N. Court Ave.  
Tucson

**ARKANSAS**  
Arkansas Sporting Goods Co.  
25 S. Duncan St.  
Fayetteville

**CALIFORNIA**  
Ben Lubic  
805 Echo Ave.  
Fresno

**FLORIDA**  
Ernest Carmichael  
Pompano High School  
Pompano

**GEORGIA**  
H. M. McLendon  
900 First Ave.  
Albany

**ILLINOIS**  
Keenan Sporting Goods Co.  
514 Main St.  
Peoria

**INDIANA**  
George Ashworth  
Wiley High School  
Terre Haute

**LOUISIANA**  
Johnny Lynch's Dunlap  
Sporting Goods Co.  
138 Carondelet  
New Orleans

**MISSOURI**  
Amco Sporting Goods Distributor  
1006 Olive St.  
St. Louis

**MASSACHUSETTS**  
Robert Boyd  
82 Carlton Ave.  
Dalton

**MICHIGAN**  
Alpena Sporting Goods Co.  
104 North Second St.  
Alpena

**Mei Aussicker**  
115 N. Jefferson Ave.  
Marshall

**NEW YORK**  
Larry Thompson (Sales Manager)  
425 Niagara Street  
Buffalo

**Max Felorsi**  
7 Ramona Ave.  
Buffalo

**VERN G. VOLAND**  
73 Richmond Ave.  
Buffalo

**NORTH CAROLINA**  
Paul & Crymes, Inc.  
415 South Tryon  
Charlotte

**JOHNSON & LAMBE CO.**  
118 Salisbury St.  
Raleigh

**OHIO**  
Steubenville Sporting Goods Co.  
147 S. Fourth  
Steubenville

**RICHARD BANKS**  
Banks Sporting Goods Co.  
Athens

**THOMAS B. McFARLAND**  
1119 Bryson St.  
Youngstown

**GLEN B. TAYLOR**  
216 North St.  
Caldwell

**ROBERT W. McGLENN**  
3425 Highview  
Cleveland

**OREGON**  
Frank Busher Supplies  
115 S.W. Pine St.  
Portland

**PENNSYLVANIA**  
Lewis E. Peterson  
382 Beatrice Ave.  
Johnstown

**TENNESSEE**  
Athletic House  
522 Gay St.  
Knoxville

**TEXAS**  
C. & S. Sporting Goods Co.  
2120 Guadalupe Ave., P.O. 697  
Austin

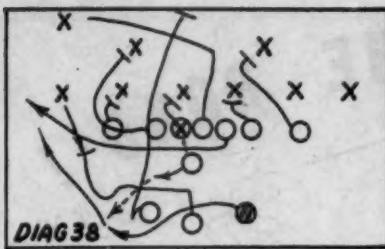
**VIRGINIA**  
Martinsville Sporting Goods Co.  
23 Church  
Martinsville

**WASHINGTON**  
Dahl & Sawyers  
709 Main St.  
Vancouver

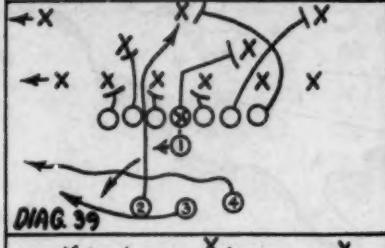
**WYOMING**  
Midwest Sporting Goods Co.  
200 South Second St.  
Laramie

# MARBA INC.

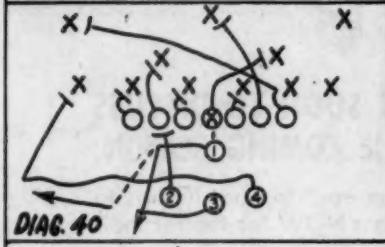
ATHLETIC EQUIPMENT RECONDITIONERS  
425-31 NIAGARA ST. • BUFFALO 1, N. Y. • CLEVELAND 0901



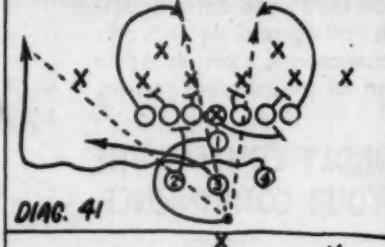
DIAG. 38



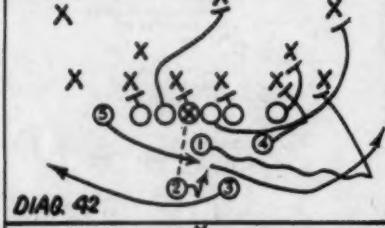
DIAG. 39



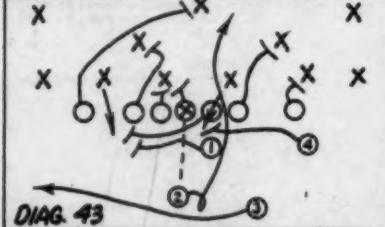
DIAG. 40



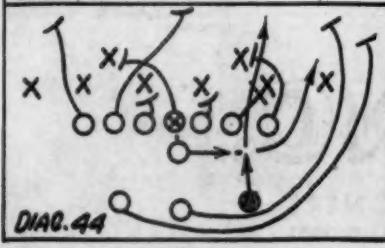
DIAG. 41



DIAG. 42



DIAG. 43



DIAG. 44

an end run to the short side. The fullback is in motion; the quarterback fakes a hand-off to the left half and tosses the ball to the right half, who goes around the defensive right end.

## The Box Formation

By Luke Whetstone  
Oskar, Alabama, High School

WE BEGIN all offensive formations with the backs lining up in the standard T. From this we send a man in motion on every play whether we are shifting to the right or left or whether we run a play without the shift. This maneuver has the advantage of keeping the defensive linemen off balance.

About 40 per cent of our plays are from the T and the rest after the shift. We seem to fare better with the T on our inside plays and with the box on our passes and outside plays.

The greatest difficulty we have with this constantly changing snap signal is with our timing, but with plenty of signal drill, the boys soon learn the style and begin to function as a unit.

Diagram 39, a quick-opener, 1 gives the ball to 2 then fakes a hand-off to 3. Back 4 is in motion.

Diagram 40, a fullback end run, 1 fakes the ball to 2; tosses it to 3 on a wide play; back 4 goes in motion and blocks the defensive right end.

Diagram 41, a pass play off of the action shown in Diagram 40.

Diagram 42. One goes in motion before the shift. Two receives the snap, fakes a reverse, hands forward to the left end who goes around the defensive left end.

Diagram 43. Two receives a direct pass from center, fakes a fullback reverse to 3, half-spins and goes over guard, mouse-trapped by 4.

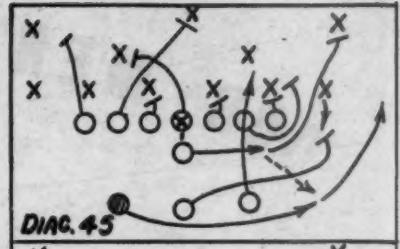
## The Notre Dame

By Marty McDonough  
Fitchburg, Massachusetts, High School

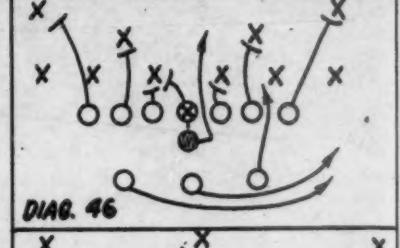
IN MY combination of the Notre Dame and T formations, I run the Don Fauot version of the T formation with seldom a man in motion. From that I shift right or left into the Notre Dame box. I can also, and do, put a flanker out in the T and use a man in motion from the Notre Dame box.

Diagram 44 shows a quick-opening play from the T—a hand-off to the right half-back from the quarterback who steps along the line of scrimmage, hands off, and then fakes a lateral to the left halfback coming around. Faking is important to keep the line-backer up and the defensive halfback honest. I use a split line to get better angle blocks.

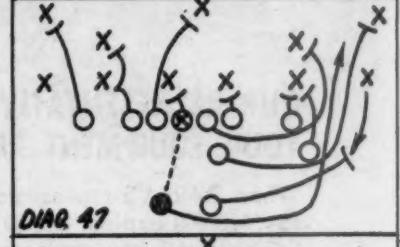
(Continued on page 62)



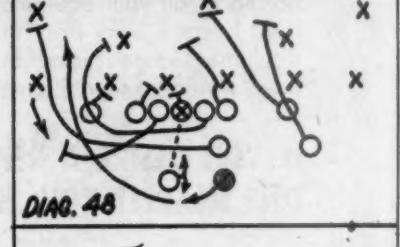
DIAG. 45



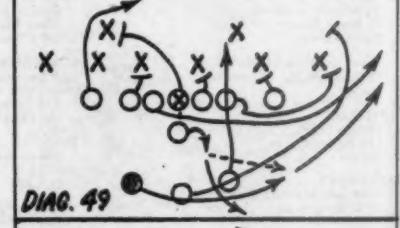
DIAG. 46



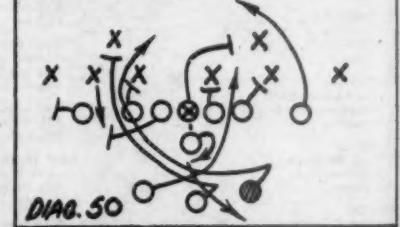
DIAG. 47



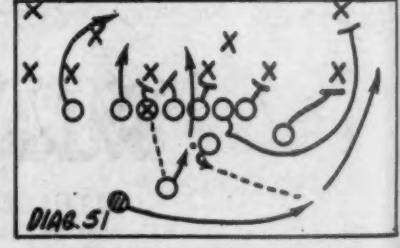
DIAG. 48



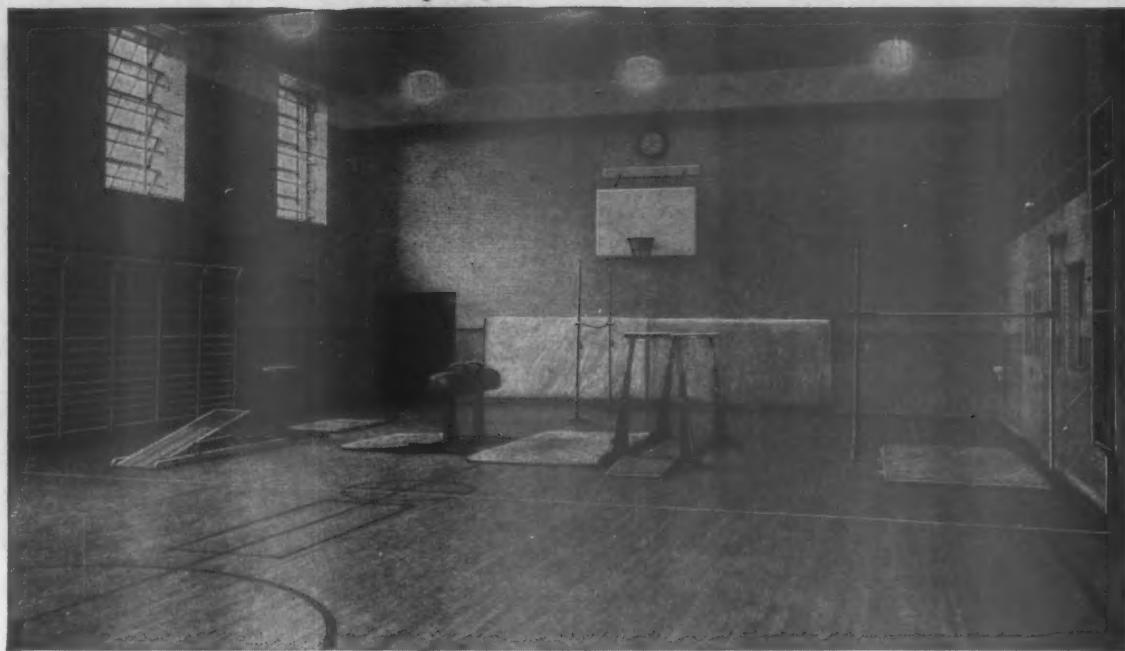
DIAG. 49



DIAG. 50



DIAG. 51



Check this list of needs for YOUR

## GYMNASIUM...



VAULTING HORSES	CLIMBING ROPES	CHEST WEIGHTS
VAULTING BUCKS	MATS	VOLLEYBALL STANDARDS
SPRINGBOARDS	MAT TRUCKS	CORRECTIVE APPARATUS
HORIZONTAL BARS	BOXING RING	PARALLEL BARS
FLYING RINGS	PUNCHING BAG	BASKETBALL
TRAVELING RINGS	PLATFORMS	BACKSTOPS
	STALL "BARS"	FAN-SHAPED BANKS

YES, Porter can equip your gymnasium completely and properly with authentic apparatus. This 79-year-old company has equipped thousands of America's leading schools, universities and clubs.

Let Porter's installation engineers help you plan your gym facilities, for efficiency and adequacy. Prompt deliveries of standard items can be made from stock. Estimates for installed equipment submitted without obligation.

WRITE FOR PORTER'S BIG 1947 CATALOG AND PRICE LIST

THE J. E.

# PORTER

CORPORATION

OTTAWA, ILLINOIS

MANUFACTURERS OF PLAYGROUND, GYMNASIUM AND SWIMMING POOL EQUIPMENT

79 YEARS OLD

# Soccer Defense

By A. W. Marsh  
Amherst College, Amherst, Mass.

**T**HE fundamentals, skills and techniques of offensive soccer were presented in the September issue, by Mr. Marsh, an authority on this sport.

FOR good defensive soccer the following well-tried principles and techniques should be taught.

1. Getting the ball from an opponent means studying his tactics and control; keeping the weight balanced on both feet ready for his move first and then keeping the weight behind the ball to hold it. See Illustrations 1 and 2.

2. If it is not possible to get the ball, the man with the ball should be forced out toward the side lines or be forced to pass out so that a shot cannot be made at once.

3. In controlling ground balls, intended as passes or shots, the ball should be trapped, if there is time; the direction should be changed to elude the attacker, and the ball should be cleared outward with a sure, even, though short, kick toward the wings so that the offense may begin.

4. With head balls it is necessary for the player to be well behind the ball to allow for the wind, and, also, for a short, forward move, taking the ball on the forehead and



Illustration 1



Illustration 3



Illustration 2

clearing outward toward the wings or the side lines.

5. The goalie should always have his body behind the ball, taking ground and body balls into the arms as well as the hands, and in the case of a high ball, when the opponents are close, he should catch, dodge and throw toward the wings or, in emergency, fist, preferably with two fists, toward the side lines. See Illustrations 4, 5 and 6.

## Team Defense

The general plan for team defense, when the center-forward and wings are excluded as offense men, consists of the inside-forwards, halfbacks and fullbacks roughly

in the shape of a diamond (Diagram 1).

This allows the insides to check the opposite insides in mid-field before the fullbacks cover the insides at the penalty area. The center-half will watch the opposing center-forward and the wing-halves will mark the opposite wing-forwards. This is one plan for man-for-man responsibility which gives the greatest security by keeping the fullbacks, theoretically the best protectors, before the goal. Some teams prefer, however, to have the fullbacks cover the wings and the halfbacks cover the three center-forwards. In either case the goalie should direct the play of the backs in order to avoid confusion in covering the opponents. Whether the center halfback hangs back with the opposing center or follows the attack well up the field as a roving back will be described as follows:

In the so-called "three-back game", the center-half plays back practically with the fullbacks chiefly on defense, checking the center-forward at all times. The fullbacks then cover the wings and the three opponents farthest up the field or nearest the goal are checked very closely (Diagram 2). The wing-halfbacks then cover the insides who are lagging behind the center and wings. On the attack the wing-halves follow the play well forward. This type of defense is very effective in preventing scoring. Some teams, though very inferior, have prevented far better teams from scoring even one goal. It is a strong defense to use when resting a center-half and there is no good substitute. It is a good defense for protecting a lead. It, however, keeps one of the most valuable players out of the attack and limits the

ROUND OUT YOUR WINTER  
SPORTS PROGRAM...

# with Badminton!

Like most coaches, you'll agree Badminton is the perfect way to fill out your winter sports program.

Badminton stands in high favor with your students. It's a game for *all ages, both sexes, seasoned athletes or the new "joiners."*

In short, you'll find Badminton meets your idea of the perfect winter game.

There's no better time than right now to see the new Wilson Badminton Equipment.

**WILSON SPORTING GOODS CO.**

Chicago, New York and other leading cities  
(A Wilson & Co., Inc. Subsidiary)

**Wilson**  
**BADMINTON**  
**EQUIPMENT**



IT'S WILSON TODAY IN SPORTS EQUIPMENT



**Wilson "Tournament"**

**Shuttlecock**

16 white goose feathers; pointed tips; perfectly balanced; selected kid base; triple-stitched for longer life.

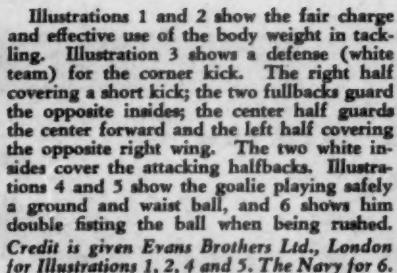


#### Illustration 4

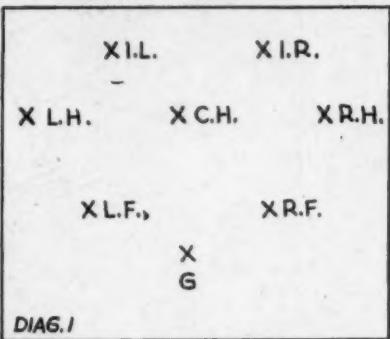
scoring ability of any team using it. In keeping the scoring down, it adds to a just criticism of the game, namely, too little scoring, and robs the game of one of its best features, many scoring chances for both teams.

In the "three-back game" the center-half is the key man on the defense as he is guarding the center-forward, who is the most dangerous man in the opponent's attack. Moreover, as the center-forward and wing-forwards play well up the field, they can be covered quickly by the fullbacks, who are always stationed between them and the goal. The chief danger in this type of defense occurs when the attack drives down the center as the fullbacks are well spread watching the wings. In this case it is important for the wing-halves, who have followed the attack well down the field, to get back promptly to cover the opposing insides. Here the halfback away from the side, where the ball is, should be the first man back to relieve the center-half. The half in the vicinity of the ball should attempt to make his opponent pass outward to the wing who will be covered by the fullback. Each fullback away from the side, where the attack is centering, must keep well in, to help the center-half until the wing-halves have returned to cover, but must watch for a long pass across to his wing-forward (Diagram 3).

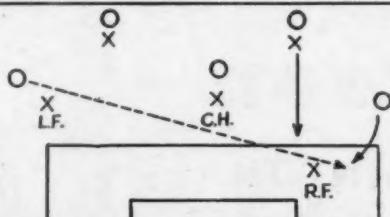
The roving or offensive center-halfback game implies, as described in the first article last month, a much more aggressive attack but a less sure defense. This, however, is better suited to the best game of soccer for, in most games, due to the difficulties involved in skillful ball-handling and shooting on the part of the forwards, the defense can afford to take chances. Therefore, in this type of game, the three halfbacks follow the play well down the field almost to the penalty area; the one farthest from the place where the ball is



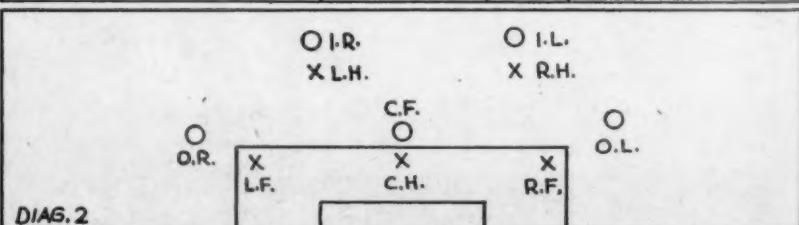
### Illustration 5



1000



DIAG. 3



DIAG. 2



Illustration 6

being played, keeps slightly behind the other two, both to cover up the other two halfbacks and also be ready to check back as the third back to help the fullbacks. When the ball is in the center of the field, the center-halfback plays well up and the wing-halves drop behind. At this time one fullback, usually the fastest man, should play down to the center of the field to help follow up the attack and, also, to watch the center-forward. The other fullback plays diagonally back of the first fullback, alert to detect the probable direction of the ball in the forming of the opponent's attack (Diagram 4).

In this position the theoretical defensive responsibility is as follows: The forward fullback watches the center-forward until the center-half gets back to cover. The other fullback will cover the wing, who may receive the ball, until the halfback returns to cover. The two wing-halfbacks should be alert to break fast when the ball changes hands, to cover their wings, or, if their wing is covered by the fullback, they should watch the nearest inside-forward. Actually as the attack develops, the defense must size up the situation quickly and be elastic to meet it. Some possibilities shown in the first article under offense



**OLD FAVORITE BIKE "STRAP" SUPPORTER**  
Woven all-elastic pouch gives extra support, is roomy and free from binding. 1 1/4" leg bands. 3-inch waistband has special form-fitting seam construction. Sturdy, long-lasting, extra comfortable.



**FAMOUS BIKE #10 SUPPORTER**  
Pouch of knitted cotton and rayon, sewn to waistband by special method allowing full lateral stretch of band at seam. Softer, more flexible pouch. Edges selvaged to eliminate rolling and curling. 3-inch waistband, 1 1/4" leg bands.



**DEPENDABLE BIKE #20 SUPPORTER**  
All-elastic throughout. 6-inch waistband. Woven, all-elastic pouch is deep, roomy, comfortable and is in one piece 6 inches wide. All-elastic leg straps 1 1/4" wide.



**IMPROVED BIKE #54 CUP SUPPORTER**  
Same as new #53 except that it has a 6-inch waistband for greater support. Two-inch selvage edge at top prevents curling of waistband. Three sizes—small, medium, large.



**WELL-KNOWN B-8 SUPPORTER**  
Sturdy leno weave cotton webbing. 6 1/4" waistband for extra support to back and abdomen. Pouch on small size is 6 inches wide. Medium and large sizes have 9-inch pouch.



**NEW, WIDE BAND BIKE #90 SUPPORTER**  
6 1/4" all-elastic waistband. New tubular leg bands of soft, light, rayon-covered elastic. Won't crease, curl or roll. Self-adjusting pouch. Sliding loop attachment for uniform tension.

## a Bike Support for every sport

**BIKE** offers you the only complete line of elastic supports.

Your athletic goods supplier can now provide you with full quantities of these high quality supports—designed to give the utmost in comfort and protection.

Look over these Bike products and order your full requirements now.



**FREE**—New descriptive folder illustrating Bike Web products, available upon request. Write Dept. K7-10.



**FAMOUS BIKE #50 SWIM SUPPORTER**  
Featherweight. Woven elastic pouch of soft cotton and rayon. Special construction sheds water, dries quickly, perfect for swimming. Pouch allows full longitudinal stretch, considerable lateral stretch. 1 1/4" waistband, 1 1/4" leg bands.



**BIKE #50 CUP**  
REG. U. S. PAT. OFF.  
MEMBER  
ATHLETIC INSTITUTE  
Keep Fit  
KINETICS AND RECREATION

\*Reg. U. S. Pat. Off.



**BIKE #80 ANKLET**

Soft and pliable knitted garment, has exceptional tensile strength with light weight. No seams or wells to irritate. Special construction insures longer wear and ability to withstand repeated launderings.

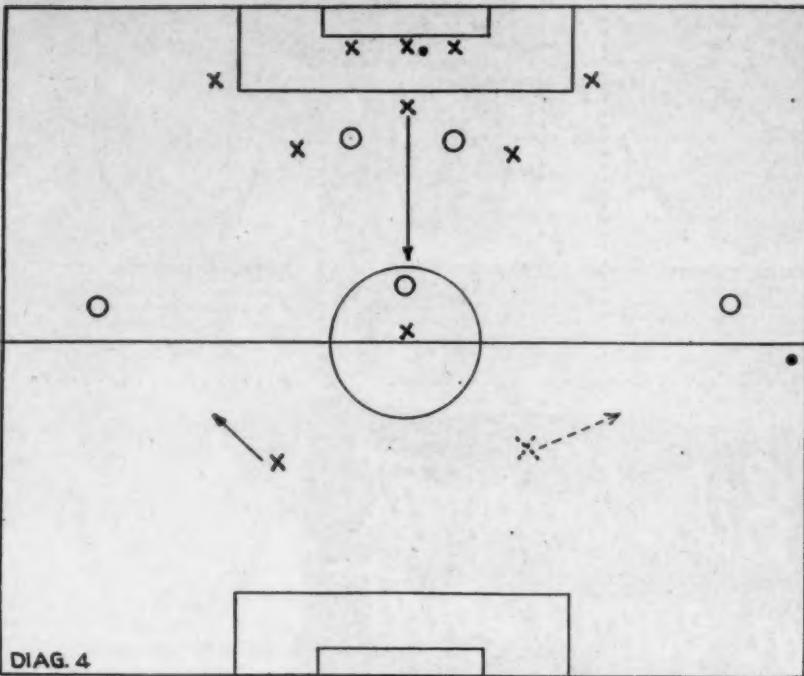


**BIKE #80 KNEE CAP**

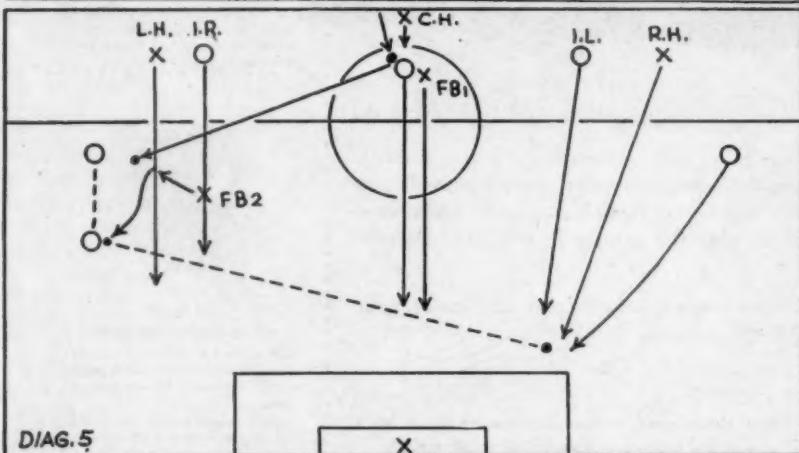
Seamless, eliminating separation of rubber and fabric and increasing its ability to withstand repeated launderings. Special construction insures long wear. Select cotton yarn and first grade covered elastic produce an unusually soft, comfortable and effective garment.

**THE BIKE WEB COMPANY**

41 WEST 25TH STREET, CHICAGO 16



DIAG. 4



DIAG. 5

are as follows:

In case the opponents pass the ball first to the waiting center-forward, the fullback, covering him in place of the center-half, should be alert, first to try to obtain the ball in case of a bad pass or weak trap by the forward. If he cannot get the ball, he should cover him, if possible, so that the pass to the wing will be forced to that wing which can most easily be covered by the rear fullback. The forward fullback should then cover the center-forward for a return pass until relieved by the center halfback (Diagram 5).

In this play, where the attack is made down the right wing, the defensive right halfback should get back quickly to the penalty area to cover both the opposing left inside as well as the outside left, in case the wing swings a long pass over the center while the right fullback is marking

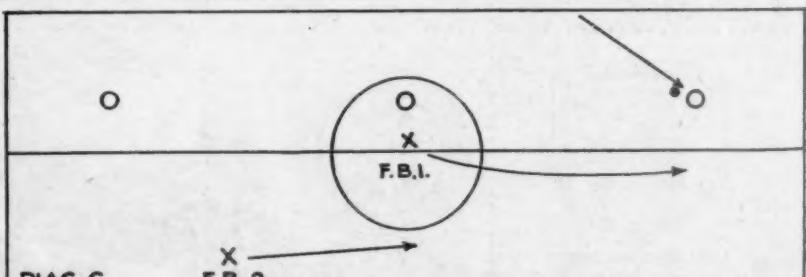
the center-forward. As soon as the center-half takes up the guarding of the center-forward, the fullbacks will take up their man-for-man responsibilities by covering the insides, and the wing-halves their respective wings. Diagram 5 illustrates this point as well as the preceding.

If the center-forward makes a short pass to either inside, that inside should be tackled by the nearest wing-halfback and, if he passes, the individual responsibilities previously mentioned should be assumed.

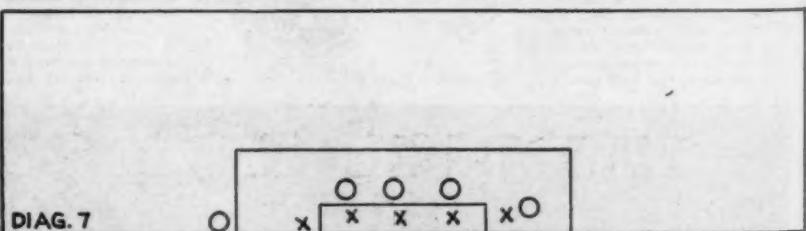
When the opponents' attack starts with a pass directly to the wing, then the nearest fullback should cover that wing, and the other fullback covers the center-forward until the other backs return to their assignments (Diagram 6).

In general, this defense requires practice, quick and accurate judgment and is much less sure than the three-back defense. It provides, however, as mentioned earlier, for a more vigorous offense and a more interesting game. There are many different defensive plans, and each coach has his own variations, but most of them are variations of these two general plans.

No discussion of defense should leave out at least one plan of defense for the corner kick. The three attacking center-forwards will usually line up before the goal, just outside the goal area, to allow the ball to fall between them and the goal so that they may play it quickly by foot or head into the goal. The center-half and two fullbacks will watch the center-forward and two insides, respectively, playing back near the goal line so that they will be in position to direct the ball outward. The halfback whose wing-forward is taking the kick should stand facing the ball on the end line at the intersection of the goal area. He should turn out all low balls and try to intercept any ball coming close to the end line across the goal mouth. The wing-half opposite the play should stand between his wing and the goal (Diagram 7).



DIAG. 6



DIAG. 7

... AMERICA'S NO. 1 BASKETBALL SHOE

Specified by MORE coaches . . . worn by MORE  
players than any other Basketball Shoe . . .  
"ALL STARS" are



*Built FOR  
Basketball!*

#### WHY "ALL STARS" LEAD THE COURT PARADE

- Lightweight, minimizing fatigue
- Double-strength toe guard prolongs wear
- Full extra cushion insole combines with cushion heel and comfort arch support to safeguard against bone bruises
- High peg top gives perfect ankle support
- Reinforced eyelets won't pull out
- Foot-form last provides perfect fit
- Non-marking, molded outsole means positive non-slip traction on all types of floors



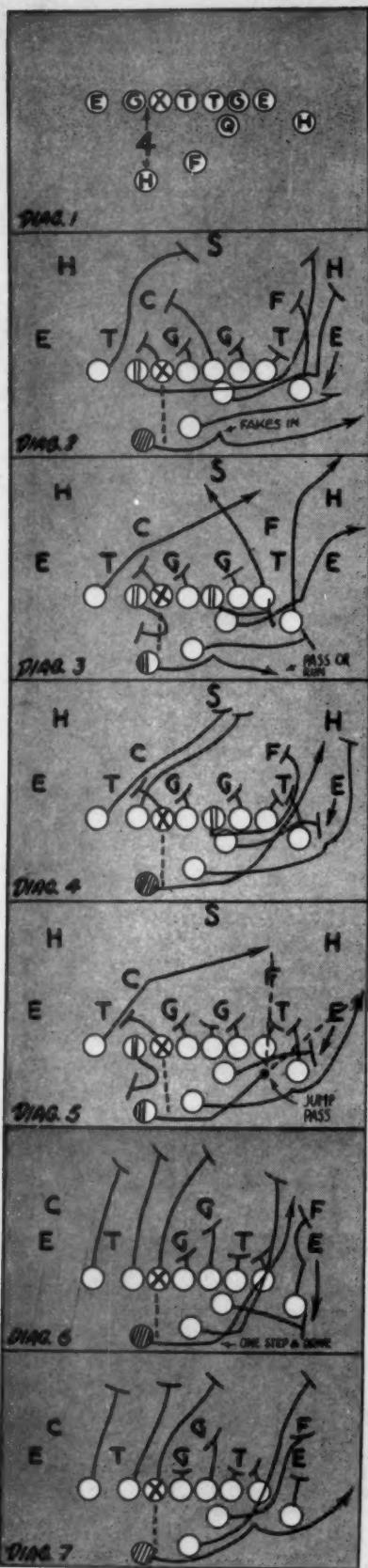
Seen  
your copy  
of the '47  
Year Book?

Basketball's Big Book just off the press. 56 colorful pages crammed with pictures, stories, facts and figures of the 1946-1947 season. Hundreds of teams; thousands of players; nation's leading scorers; authentic All-American selections; Converse-Dunkel ratings for all college teams. Ask your distributor for a copy. Basketball coaches and athletic directors may obtain a free copy by writing direct, using school stationery and giving official title.

NEVER "just another sneaker," "All Star" canvas basketball shoes originally were designed and built especially and exclusively to meet the tough grind of basketball play. Keeping pace with the vastly faster game, "All Stars" have been constantly improved. You'll find today's "All Stars" better than ever . . . in fit, in comfort, in the ability to take the grueling punishment of modern court battles. This season, when you tell your outfitter, "Converse 'All Star' shoes, of course," you'll have ordered the finest basketball shoes Converse has ever produced.

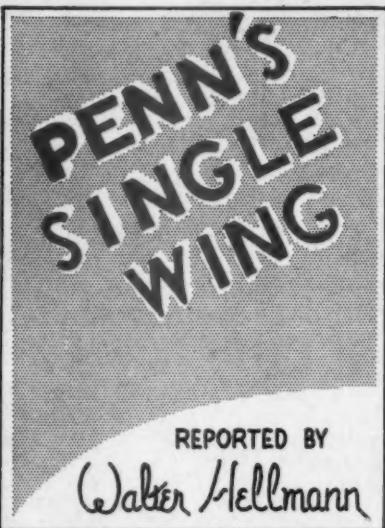
**CONVERSE**  
*'Chuck Taylor'*  
**ALL STAR**  
**BASKETBALL SHOES**

CONVERSE RUBBER COMPANY  
MALDEN 48, MASSACHUSETTS



THE single wing has all the potentialities of the T plus more concentrated power. Any of the play cycles may be run with one of the backs as a flanker or man-in-motion without change of assignments. Ends and other linemen may be split as in the T to give blocking angles or to spread the defense.

The buck-lateral series of the single wing gives the same effect as the fake dive and pitch-out of the T. The fullback spin series hides the ball momentarily, giving the offensive blockers the same edge which the quarterback pivots give to the T linemen. Single-wing teams, accustomed to the power thrusts of their offense in practice, are better able to meet hard-driving offenses than are T linemen who, as a rule, have to contend with only one-on-one blocking. The single wing can throw more pass receivers at greater depths without change of alignment as is necessary in the T. Since there are more T teams than single wing the latter have

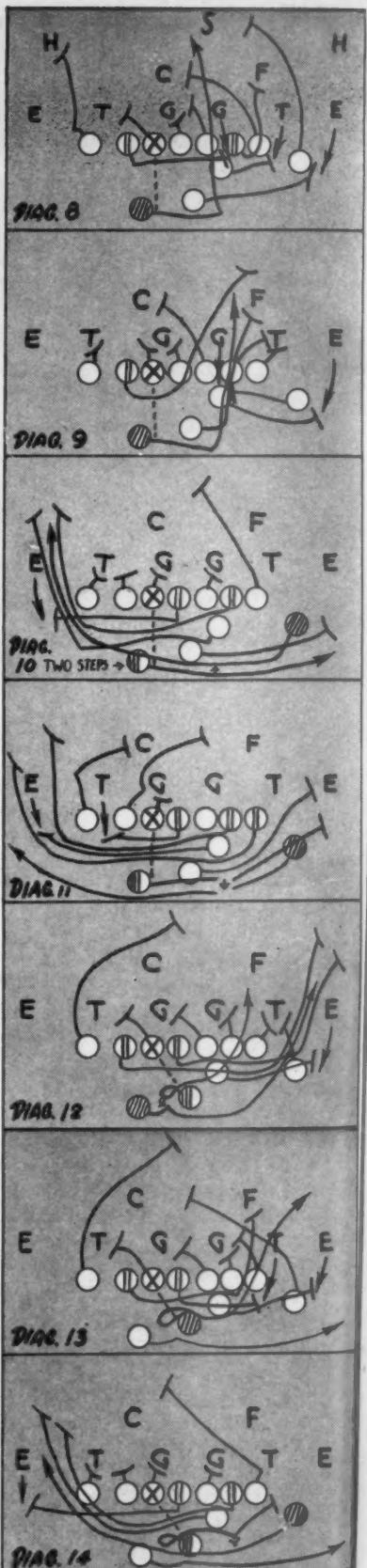


the advantage of being less well known and therefore present unexpected problems to the defense.

The University of Pennsylvania single-wing basic formation is shown in Diagram 1. The tail-back is four yards behind the seam between the weak-side guard and center. The fullback's heels are in line with the tail-back's toes and he is in the seam between the tackles. The blocking back is one yard behind the seam between the outside tackle and guard and the wing-back is one yard out and one yard behind the end. The short-side end is the only lineman who splits. Since the guards do the bulk of running on interference, they are placed at the outside spots. The slowest man, usually a tackle, is placed in the middle spot of the line.

The backs and linemen take similar stances, a three-point in which the feet are slightly wider than the shoulders and

(Continued on page 49)



# No-whip Bask\*Nets

join  
*Gold Medal*

The American Net and Twine Division of The Linen Thread Co. Inc., is happy to offer NO-WHIP BASK NETS as well as Gold Medal Basketball Nets—a complete line of hand-knitted, quality nets.

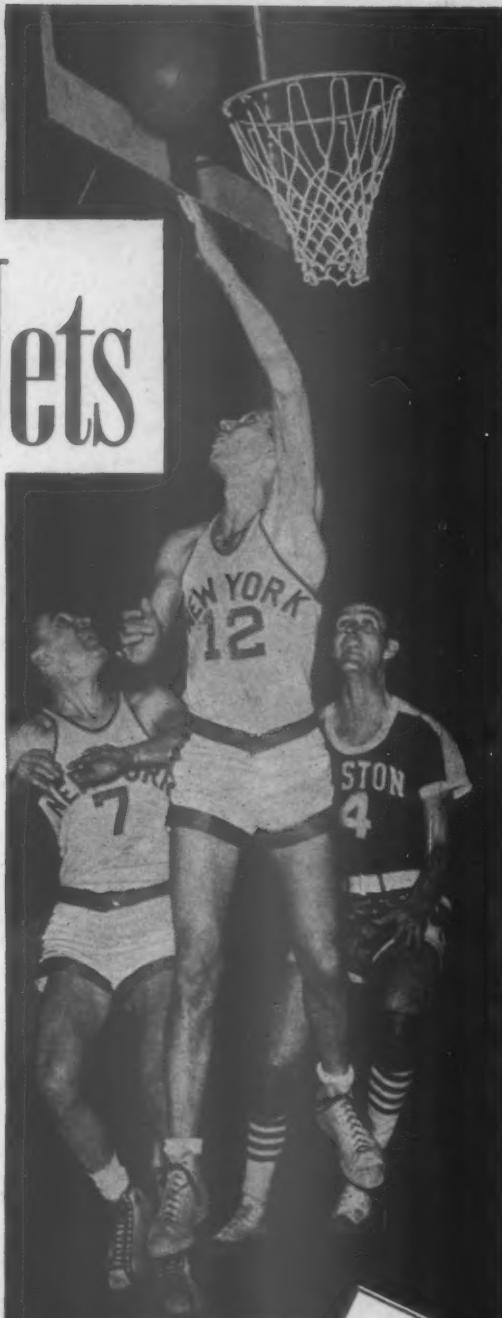
Note these important NO-WHIP BASK qualities:

- Hand knitted of extra heavy Seine Twine
- Will outwear two ordinary pairs of nets
- Narrowed in middle to momentarily retard downward progress of ball. This feature eliminates "whipping" of ball
- Heavier Twine gives greater visibility
- Loose ends bound with tape
- Wide bottom assures ball's dropping straight down.
- Complies with specifications of National Basketball Rules Committee. See Sec. 10, Rule 1, in Official Basketball Guide.

For your College, High School, "Y" or Recreation Center Court you will want these better nets—make sure you see your dealer early.

\*Reg. U. S. Pat. Off.  
No. 401614

N. Y. Knickerbockers playing Boston Celtics at Madison Square Garden where NO-WHIP BASK Nets are standard.



## *Gold Medal Nets*

THE AMERICAN NET & TWINE DIVISION  
OF THE LINEN THREAD CO., INC. • 60 E. 42 ST., N.Y. 17, N.Y.

Baltimore 3, Md. • Boston 10, Mass. • Chicago 10, Ill. • San Francisco 5, Cal. • Philadelphia 6, Pa. • Gloucester, Mass.



MAKERS  
OF FINE  
NETTINGS  
FOR  
105 YEARS



# CO-OPERATIVE GOLF

## To be extended to Colleges

THE September issue of the ATHLETIC JOURNAL announced the inauguration of a co-operative program, co-sponsored by this magazine and the National Golf Foundation, to aid the development of golf in high schools. This announcement contained a tournament award- and material-request mailing blank. Almost immediately following the appearance of the announcement, the ATHLETIC JOURNAL received inquiries from a number of colleges and universities inquiring as to the possibility of making the awards and tournament material available for events conducted by institutions of higher education.

As a result of this interest evidenced by colleges and universities, the co-sponsors of the program have decided to make the awards and material available to these institutions.

### Medals and Award Certificate

IT WAS originally announced that the awards would be in the form of small pins.

At a meeting of the co-sponsors and the Advisory Committee it was agreed that medals would be more appropriate for the events and it was felt that they would be more appreciated by their recipients. It was, therefore, decided to change the awards from pins to medals and to include with them attractive lithographed award certificates. The medals now in preparation have been designed by the noted designers, Reising and La Ross, who were commissioned to create the medals especially for this tournament program. There will be medals and certificates for both boys' and girls' events. The medals will be illustrated in the





# GOLF PROGRAM

## Colleges and Universities

November issue of the **ATHLETIC JOURNAL**. The award certificates to accompany the medals are 10 $\frac{3}{4}$  inches by 8 $\frac{1}{2}$  inches in size and are attractively lithographed in colors on heavy rag bond stock. A gold embossed seal and attached ribbons will add much to the beauty of the certificates.

### Start Planning Now

THE time to make the arrangements for the tournaments is now. In the northern climates, a great majority of golf courses are closed during the winter months. Arrangements for use of facilities for next spring should, if possible, be made this fall. You can also help us tremendously in preparing and shipping the material, if you will mail the entry blank in as soon as tournaments are definitely scheduled.

### Advisory Board

To assist in conducting this tournament program an advisory committee has been formed, consisting of the following:

Herb Graffis, Editor, Golfdom and Golfing Magazines.

John Griffith, Publisher, **ATHLETIC JOURNAL**.

Eldon I. Jenne, Director, Health, Physical Education and Recreation, Portland (Ore.) Public Schools.

Glenn Morris, Director, National Golf Foundation.

Robert J. Strauss, Supervisor of Golf, Public Recreation Commission, City of Cincinnati.



*Pictures courtesy "Golfing" Magazine*

**ATHLETIC JOURNAL, 6858 Glenwood Ave., Chicago 26, Illinois**

Please register us for the following tournaments and send us free of charge all the necessary materials, including awards, for:

Boys' Tournament

Girls' Tournament

School .....

Address .....

City..... Zone..... State.....

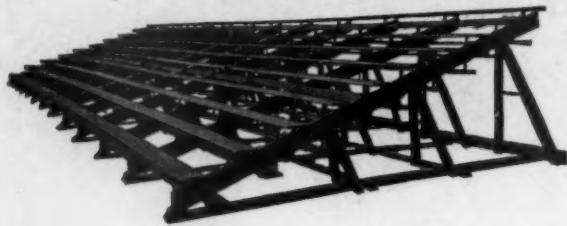
Approximate number participants: Boys..... Girls.....

School enrollment..... Approximate dates of tournaments.....

Signed .....

POSITION .....

We Suggest  
**YOU ORDER BLEACHERS NOW**  
 for 1948 Needs



It now appears a certainty that raw materials will remain scarce during the first half of 1948 and it is our earnest advice that if you desire bleachers or stadiums, steel or wood, for use next year that you place your orders at the earliest possible moment.

**LEAVITT CORPORATION**  
 (Est. 1895)  
 URBANA, ILLINOIS



## ON THE WAY!

Schools everywhere know the low cost in school towels provided by the long service in daily use of durable, absorbent McArthur School Towels. Your school, too, can be on the way to real economy, real efficiency in its athletic system, with the installation of the McArthur School Towel Plan. For complete information, write Geo. McArthur & Sons, Inc., Baraboo, Wisconsin.

**McArthur**  
 SUPER-GYM and SUPER-TURK  
**School Towels**

## Center Play and the Tall Pivot Man

(Continued from page 11)

gain much confidence when he can handle any type of ball thrown in, the same way that a baseball catcher's ability to handle any pitcher enhances the morale of the ball club.

### *The Pivot Shot*

Having established the ability of the center to handle any ball from a fixed stance, the next step is to have him come in to a pivot spot in front of the basket and then, faking right or left, execute a right handed or left-handed pivot shot.

Few boys come out of high school with a good pivot movement. Most of them execute only a quarter turn, throwing the ball over their heads with a hook. They may get "hot" occasionally with this but it is not accurate, and the player should really be facing the backboard when he releases the ball. This enables him to guide the ball all the way. There is no doubt this will make him a faster player with better co-ordinations.

Practice may be set up as follows: Have the center take a position to the left of the basket, outside the free-throw lane and about three feet up court from the backboard, then break into the free-throw lane as the ball is fed to him. He may shuffle in, or take one cross-over. Getting the ball, he then fakes to his right, mainly with his head and shoulders, then widening his stance as far as he can to his left, he pivots on the left foot and makes a half turn, bringing the ball up at the same time, and not releasing it until the arms are at full extension. It is not a hook shot, although there is a slight hooking action of the wrist and fingers that puts the ball against the backboard. After the pivot to the left has been accomplished, then a double fake, right, left, followed by a right pivot with a left-handed shot may be attempted, then a step away. Diagram 2 illustrates this practice.

The next step in the development of the

**FOLLOWING** service as an infantry officer in World War I, Coach Herbert W. "Buck" Read, joined the physical education staff of Western Michigan College in the fall of 1919. He became head basketball coach in 1922. In the quarter century since then his teams have played schedules including many of the top-college teams of the country. In 1943-44 his "Broncos" finished fourth in the nation. He has been fortunate in Madison Square Garden, winning in the four appearances there which began in 1944. His all-time average is .708.

He has been three times chairman of the Rules Committee of the National Association of Basketball Coaches, was secretary-treasurer last year, and now is the first vice-president.

*MacGregor*  
*GoldSmith*  
SPORTS EQUIPMENT

## HARDWOOD FACTS



**LAST BILT**  
**X10L** *Flight Master*  
with **FINGER-TIP CONTROL**

A special deep pebbled, leather cover gives the Flight Master that "tacky" feeling . . . makes it easy to handle and control. Patented seam-like channels prevent sailing and floating. The MacGregor Goldsmith X10L is carefully built up over a scientifically true, and perfect wax last . . . vulcanized into a uniform, evenly balanced carcass. It's durable yet resilient. Each Flight Master is precision made, exactingly controlled as to size, shape and weight.

**X9L** *THE ORIGINAL Laceless*  
PATENT NO. 2,550,089

The Official Ball for the  
9th Consecutive Year

Year after year the MacGregor Goldsmith Official "Laceless" basketball continues to be adopted for all intercollegiate games in Madison Square Garden, Philadelphia's Convention Hall, Buffalo's Memorial Auditorium, and other great arenas. Championship play demands a championship ball. The X9L is selected for its finest quality, top grain leather, its rugged "Multi-Ply" double lining, and its patented "Para-Valve" bladder. Size, weight, shape, balance and "feel" rigidly controlled.

*MacGregor GoldSmith Inc.* CINCINNATI 14, OHIO  
SCORES IN EVERY FIELD OF SPORT



# SAND KNIT

Athletic Knitwear and Clothing



Basketball Uniforms

Football Uniforms

Wrestling Trunks

Boxing Trunks

SAND KNITTING MILLS CO., 2331-41 N. Washtenaw Ave., Chicago 47, Ill.

Award Sweaters

Jersey Jackets

Pullovers

Warm-Up Apparel

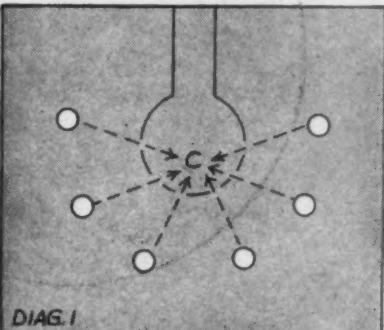


25 YEARS OF  
Superior Quality

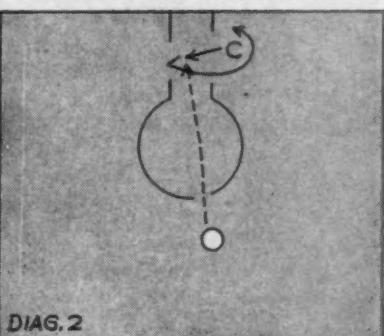
center would be to make him faster on a drive-in-shot. This is possible if an alternating pivot system is used, with the taller forward doing the pivot work part of the time. Under this strategy, the center may pull out to the corner or the side, freeing the area under the basket, then come driving back in. Speed would be essential here, with ability to execute a fast lay-up shot.

The practice is simple. Let the center station himself at the side line, then start in fast, being led with the pass, just enough to keep him extending himself. After he has worked from the right awhile, have him come in from the left. A valuable feature of this practice, as well as of the preceding one, will be established when he is made to follow up his misses, until he hits, either with two-handed recovering shots, or tip-ins. It is an exhausting practice, and he should be spelled off in all practices by the sub center and taller forward (See Diagram 3).

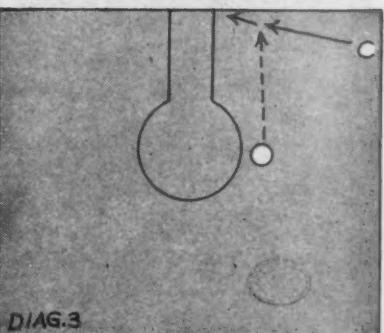
The fourth practice is rebound work. Place the center eight feet in front of the basket, facing it, and shoot over his head, making the ball come off either the right



DIAG. 1



DIAG. 2



DIAG. 3

## NURRE PLATE GLASS BANKS

voted  
TOPS  
by  
coaches,  
players and  
spectators!



NOW STANDARD WITH

THE BIG NINE

They're always smooth, solid, lively, never warp, rust, chip or splinter! Bank shots are more accurate, rebounds livelier!

Nurre Plate Glass Banks are popular with spectators, too, providing better visibility for end-of-court seats.

Made of thick, polished plate glass. No Nurre Bank has ever been broken in normal play.

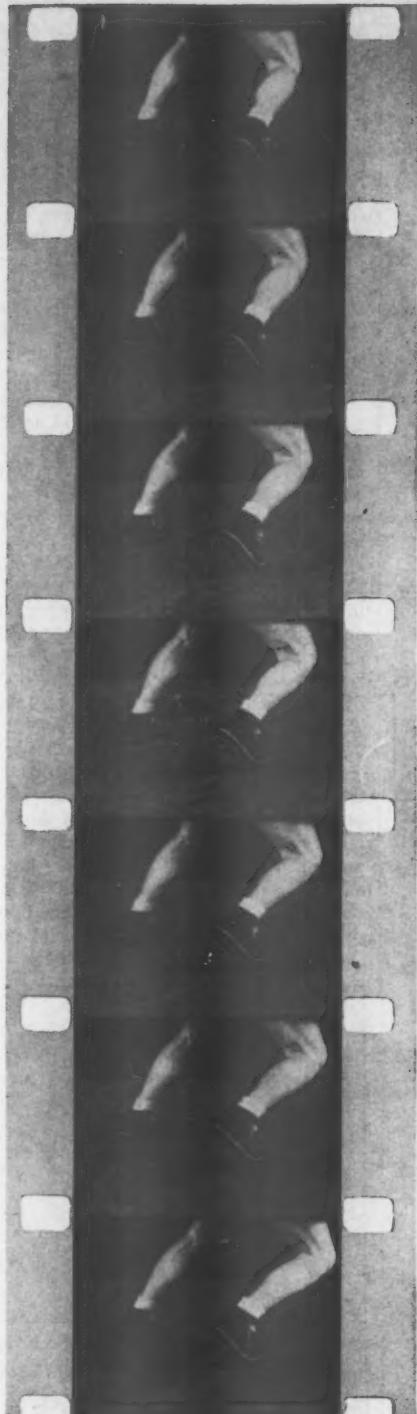
Prepare for your '47-'48 season. Install Nurre Plate Glass Banks now! Write for circular today!

### Recent Installations

Indiana University  
Ohio State University  
Illinois University  
Loyola University  
Purdue University

**THE NURRE COMPANIES, INC.**

Dept. BB—Bloomington, Indiana  
Memphis, Tenn., Dubuque, Ia., Egg Harbor, N. J., Dothan, Ala., St. Louis, Mo., Kansas City, Mo.



Section from Ball-Band film "America at Play" on the importance of the right footwear for sports use.  
16 mm. sound, color film, 25 minutes.  
If you have a sound projector and would like to see this film, write us. There's no charge.

## THE *Right* SHOE CAN MAKE THE DIFFERENCE!

That winning speed margin is built into Ball-Band basketball shoes. It's in the way they fit at toe and ball and shank. It's in the support provided by the special duck uppers that are carefully tailored over special sport lasts. It's in the special floor gripping sole compounds. It's in every feature of these special shoes that have won the approval of coaches who want the best for their teams. See them at the store that displays the Red Ball trade-mark, or write us for full information.



ONLY BALL-BAND GIVES YOU ARCH-GARD

BALL-BAND athletic socks are made of double core yarn, soft but very strong and long wearing. Be sure to specify Ball-Band.



Here's the Ball-Band KLINGER that's made with the famous ARCH-GARD triple cushion support. It gives strong, but gentle, comfortable, correct support to the entire foot.

# Ball-Band

MISHAWAKA RUBBER & WOOLEN MFG. CO.

Mishawaka, Indiana



REG. U. S.  
PAT. OFF. 1901

# Champion for Basketball

## A Complete Line of UNIFORMS and EQUIPMENT



**JERSEYS** Sleeveless or Quarter-sleeve in Cotton, Rayon Plait, and Durene . . . featuring Champacraft processed lettering and designs. Special complete unit prices in various ranges.

**PANTS** In new, lustrous "Celanese" Playtwill and Gridiron Twill fabrics. Standard cut, with pads, self-belt and buckle. Complete with colorful trim.

**JACKETS** Attractive, well-tailored "warmups" featuring Champacraft processed lettering and designs. Regular and reversible in "Celanese" Playtwill, Gridiron Twill, Brushed wool, or Melton.



GAME AND PRACTICE ACCESSORIES,  
INCLUDING FAMOUS CHAMPACRAFT  
PROCESSED "T" SHIRTS

WRITE for New Champion Basketball Catalog

**CHAMPION KNITWEAR CO.**  
71 ST. PAUL STREET

ROCHESTER 4, N. Y.

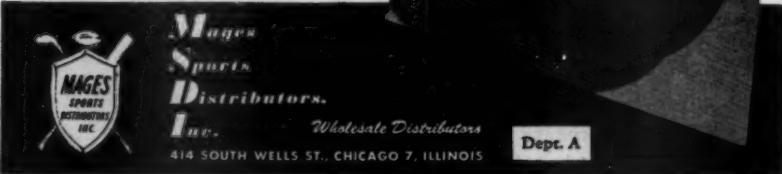
**We Repair**  
**FOOTBALLS, BASKETBALLS**  
*and other inflated goods*  
**AS GOOD AS NEW!**

Don't discard used footballs, basketballs, etc. . . . we can rejuvenate them to be as good as new . . . your old equipment can be ideal for practice sessions or use by freshman teams . . . we insert new bladders, repair linings and covers, repair inflated goods with the guarantee you'll be satisfied.

*Write for details today. Prompt service.*

We handle a complete line of sports goods for immediate delivery . . . are direct factory representatives selling to the school trade at the extreme lowest discount price. All terms net, 10 days to rated accounts. All others 1/3 down, balance C.O.D.

*Write for our latest price list today.*

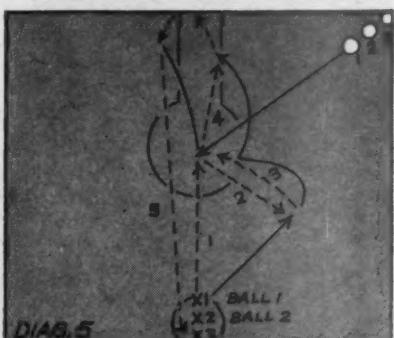
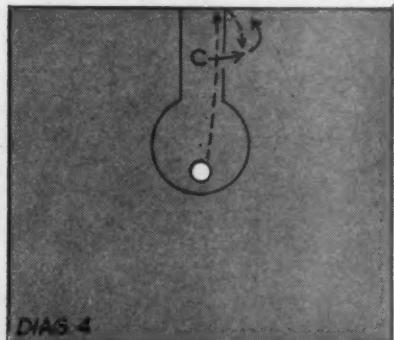


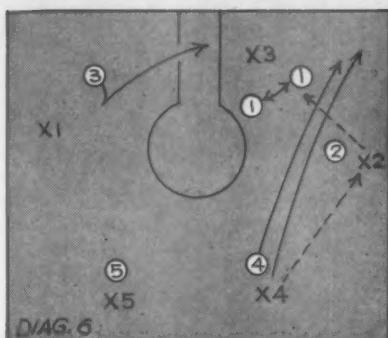
or the left rim. It must be stressed that he get the ball at the greatest height possible, arms fully stretched. He can then shoot a "dog" shot, or pass out to a teammate as in a fast-break practice. In the latter case he should learn to pivot fast as he hits the floor. Occasionally he might be coached to turn in the air and pass off before hitting the floor. The positions of coach and center are shown in Diagram 4.

My final special drill for the center, is what I call a double-cut drill. Designed primarily to give general floor work to the team, I find that it gives valuable ball-handling practice to all candidates for center and the taller forwards who are alternating in pivot work.

Here is the way the drill is executed. I place all the center candidates at the right-hand corner to start, and the rest of the squad at the center of the floor. Two balls are used at the start in possession of the first two men who are going to pass in and cut.

The center breaks fast to the front of the free-throw line. The ball is passed to him, then back to the floor man who has cut forty-five degrees to his right and about halfway down to the place where the free-throw line would be extended. No deeper, or a good cut cannot be made. Then the floor man again pitches the ball into the center with a catcher's peg, and sharply follows the ball in, faking to go left of the center, then breaking right, and being fed an overhead pass from the center for a "dog". The center follows the pass in, takes the ball from the basket or off the bank, then throws it back to the center of the floor, and goes to the opposite corner. Meantime, the second floor man repeats the maneuver, with the second





pivot man coming out. This gives a maximum of practice to all the squad.

Floor men may cut left or right after putting the ball in, and after the centers have worked a while in front of the free-throw line, they may come to points left or right of the free-throw circle, about one third of the way to the side line. The general pattern of the practice remains the same. The drill is shown in Diagram 5.

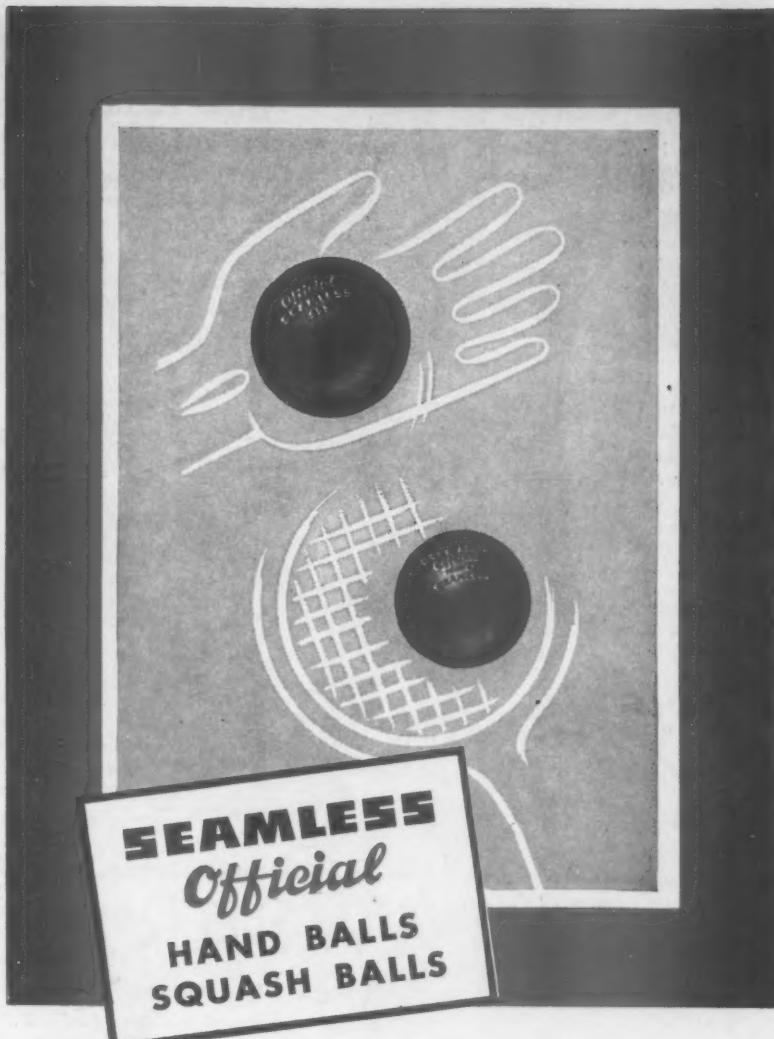
X1 passes in to O1 who has come from the corner. X1 cuts 45 degrees right, receives the ball back from center, passes in again, fakes to go left of center, but goes right and gets an overhead pass from the center. The center follows in, gets the ball off the bank, passes back to X3, and goes to the opposite corner. Meantime, X2 with a second ball executes the same maneuver with O2.

This covers the individual development of the center, not only for general pivot play, but to make him faster and more skillful to offset mathematically the scoring done by the tall center in his unpreventable "dunking."

The next step has to do with the use of a teammate to cut down the number of times that the giant has the ball. We are all familiar with the technique of a forward dropping back in front of the center to make interceptions. The pass, however, may be so high to these supertall men that this will be ineffective. A different technique is then indicated.

The way I worked it out against one tall man, 6 feet, 11½ inches, was as follows. I had my tallest forward, 6 feet, 4 inches, play in front of this center all the time, keeping between him and the ball, and as the pass came in, not try to catch it, but simply deflect it. That is, he would leap and simply extend the one arm, throwing the ball off course with his finger tips. That gave him an unusual reach, like jumping up to get an apple off a tree with one hand.

My center, a 6-foot, 3-man, I had play on the opposite side of the free-throw lane, and at such times as the ball did get into the giant, usually when my forward failed to keep in the line of the potential pass, he would cut across the free-throw lane and cover the big boy from the rear which always at least made the "dunking" less simple. The forward, as soon as he saw the ball was over his head and proba-



## WHO? WHEN? WHERE? WHY?

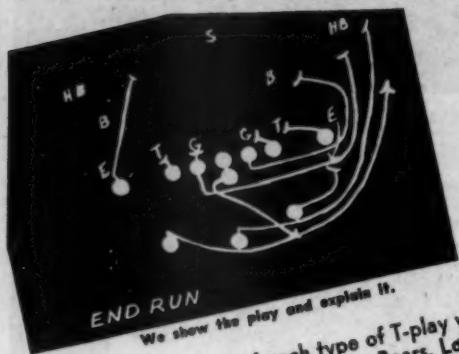
These SEAMLESS balls are used by most championship players whenever and wherever they play. In millions of practice games and in *all* important tournaments . . . Why? Because these SEAMLESS balls *always* make good in every test. The *most critical* judges of quality—and value—will use no other ball.

SR555 Hand Balls SR560 Squash Balls

FINEST QUALITY SINCE 1877



ATHLETIC GOODS DIVISION  
THE SEAMLESS RUBBER COMPANY  
NEW HAVEN 2, CONN., U. S. A.



## THE T FORMATION

by  
VISUAL EDUCATION

REEL 1—Basic T Plays

REEL 2—Open T Plays  
In 16-mm in Color, Sound

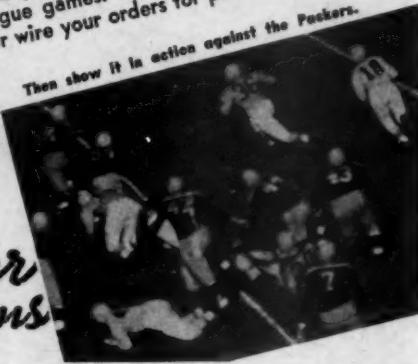
Only the very best of each type of T-play was selected from each game. The plays are run by the Chicago Bears, Los Angeles Rams and Chicago Cardinals. Fundamentals such as pivot and step-out hand-offs, and fakes are clearly shown by such experts as Luckman, Waterfield and Christman under game conditions! First, the play is diagrammed, then explained and then run in actual major league games. The demand has been so great that we ask you to airmail or wire your orders for prompt delivery.

School Price  
\$79.50 Per Reel  
both reels \$150.00

We have many athletic films for rental purposes, write for our free catalog.



113 S. Washington St.  
Green Bay, Wisc.



## SWIMWEAR



### PURE SILK TRUNKS

The finest and lightest trunk available. Furnished with full silk circumferential supporter in sizes 24-42. Colors: black, royal. School price \$5.75 each

### SATIN LASTEX TRUNKS

This fine trunk is made of one by one stretch lastex. Has hidden pocket to eliminate drag. Elastic waist with channelled drawstring. School price \$3.80 each

### JERSEY RACING TRUNKS

A snug-fitting featherweight trunk of top quality jersey. Regulation built-in V-type supporter with drawstrings. Standard colors and sizes 24-42. School price \$30.00 per dozen

### AQUATEX WOMEN'S TANK SUIT

An exclusive Adolph Kiefer & Company fabric, made with pure cotton jersey yarn. Durable, firm knit, light and with vat dyed colors. Sizes 28-42 in gray without skirt. Also available in light blue, royal, scarlet and gold at slight additional cost. School price \$15.00 per dozen

WRITE FOR NEW CATALOG

**ADOLPH KIEFER & COMPANY**

*Aquatic Supplies*

765 W. Lexington St., CHICAGO 7



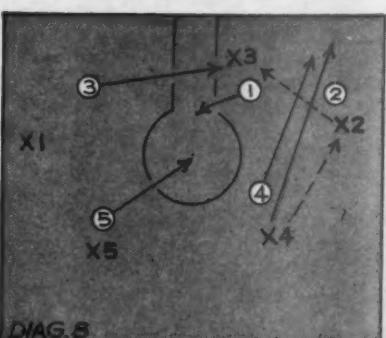
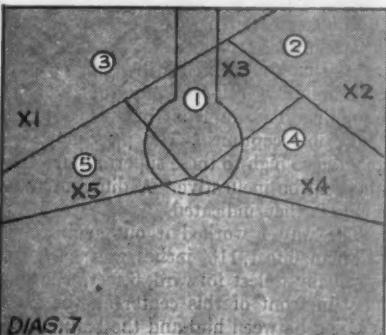
bly in possession of the big man, cut immediately across the free-throw lane and patrolled the area vacated by my center. This whole maneuver is presented in Diagram 6.

The tall forward O1 shifts over in front of the tall center X3. The center O3 crosses over and plays X1 loosely. If the ball gets over the head of O1, O3 crosses behind X3 and O1 switches back. O2, O4, and O5 play a tight man-to-man, but drop back on screens to let a teammate through.

Another method of checking the deprivations of the big man employs a zone-defense principle, although the final action will look something like that shown in Diagram 6.

Just before the offense, featuring the big man, goes into action near the basket, the defense takes the positions shown in Diagram 7. The tallest man X3 will be in a zone in front of the basket, the two men next in height will be in zones to either side of him. The two fastest men will be in the front zones, playing their opponents almost like man-to-man, so as to harry the potential feeder. The initial position is shown in Diagram 7, ensuing action in Diagram 8.

It cannot be claimed that either this or the preceding defense will take care of all situations, but it will cut down the number of times the tall center has the ball and thus will not only lessen his scoring total but will bolster the morale of a ball club, the players of which, understanding percentages, will not be easily demoralized. Added to this, the center, not broken in spirit because of futility in trying to stop an altitudinous opponent, will do better.





## LOST CLEAT...LOST GAME...

They needed speed in the backfield that day, but the boy who could really "carry the mail" sat on the bench . . . sidelined since scrimmage by a cleat-bolt injury.

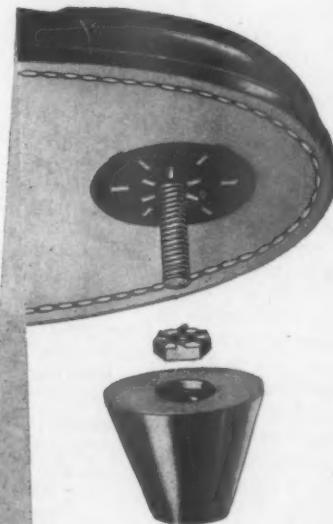
# It won't happen with BROOKS . . . ONLY FOOTBALL SHOES with the CLEATS THAT CAN'T COME OFF!

Patented "Lock-Tite" Washers and Ratchet Nuts, exclusive with Brooks, help you to build a winning team from the ground up . . . in three ways!

**SAFETY** . . . Outer row of ratchets on washer interlocks firmly with cleat . . . injury-making bolts are never exposed!

**SPEED** . . . Inner row of ratchets interlocks with ratchet nut . . . the bolt can't "back up" to cause handicapping blisters!

**LONGER WEAR** . . . Cleat assembly holds firm for the life of the shoe . . . shoes need not be discarded because of loose bolts!



Available in  
Collegiate, Professional  
and High School  
Models



**BROOKS**  
SHOE MANUFACTURING CO.

PHILADELPHIA 39, PA.

*"Build a Winning Team  
from the Ground Up"*

# DEFENSE: for the Team

(Continued from page 12)

are all permitted to tackle. This drill gives the linemen valuable practice in remaining as a unit. It also provides practice for the defensive backs and line-backers in defending their positions against running plays.

Another drill which we use in teaching line play is to set up the six linemen against the offense and hold a scrimmage without any support on running plays from the secondary or the tertiary.

## Team Defense

Diagram 4 illustrates the movements and duties of the defensive halfbacks, the safety, and the line-backers on running plays. The left defensive halfback should start straight for the defensive left end and should protect to the outside against anything developing wide. He protects against the wide play from the outside. The defensive fullback protects against the wide run by approaching from the inside as the diagram illustrates. The safety comes up to the outside, protecting the territory between the defensive left halfback and the strong-side line-backer. The defensive center or weak-side line-backer moves along a line parallel to the line of scrimmage very cautiously. The right halfback should never make a tackle until the ball-carrier has made ten or fifteen yards. He must be impressed with the importance of staying at home until the play is well under way.

A few years ago, we could tell our halfback that, by observing the right end and wing-back, he could determine the type of play to be expected. Style of play has changed so that it is impossible to key off these men now. At that time if the offensive right end released, one could be reasonably sure that the play would develop into a pass or a reverse to the other side of the field. Now we often find the end releasing on wide plays. We feel today that, if the right offensive end blocks, we can still tell the left halfback that he can immediately come for a running play as a pass is not indicated.

We do not like to have our right defensive end chase the play from behind the line of scrimmage. After he crosses the line of scrimmage, and protects his territory, we like to have him step back as a line-backer to defend against a cut-back or a short pass over the line, or in the defensive right flat. The other linemen should penetrate across the line, protect their respective territories, then cross the field as a unit as they are supported by the secondary.

Diagram 5 illustrates the defense against a wide play to the weak side. Too often coaches give their individual players too big a responsibility. We, in the past, have

expected too much of a tackle playing against the wing-back style of play. In most instances, and certainly in this instance, the defensive linemen should be given a responsibility of protecting the territory to the inside or outside but certainly not to both the inside and outside. I should like to stress again that the defensive linemen must never worry about the ball-carrier until they have reached the spot they are to defend. The defensive men should be taught to forget the ball

until they have reached the spots they are to protect. As illustrated in Diagrams 4 and 5, it is important that the ball-carrier on wide plays be kept between the defensive halfback and the line-backer on that side of the field. The defensive line-backers, halfbacks, and safety should be given a great deal of practice in working as a unit in defending against wide plays.

Diagram 6 illustrates the movements of the defensive linemen and line-backers when employing a five-man line. We assign each lineman a spot across the line of scrimmage to reach in his initial charge even when we employ a five-man line. We do not want our linemen to worry about the ball until they get across the line of scrimmage.

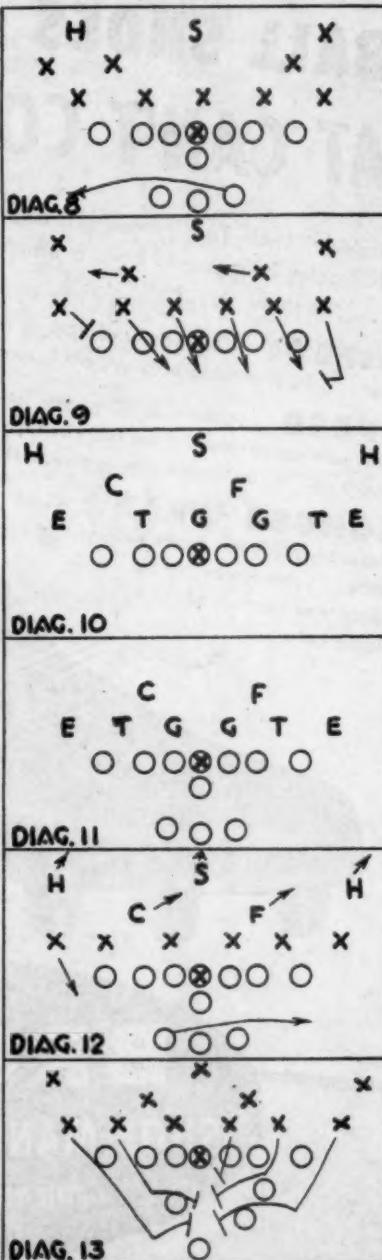
The T formation is more difficult to defend against than any other formation. The reason for this is that every team uses the formation a little differently and gets a little different something out of it. We depend on our scout reports a great deal in setting up a defense against an opponent employing the T formation. We have learned that, although the T is a very simple offense, it is a very good one and is very difficult to defend against.

Diagrams 7, 8 illustrate defenses we have employed against the T formation.

## Defense Against Passes

Since rushing the passer plays such a big part in any pass defense, a coach should spend a great deal of time in teaching his men to rush the passer. Each day of practice we spend the last ten minutes giving the defensive linemen practice in rushing the passer. We instruct our linemen to go for the spots of protection, and then immediately for the passer as soon as a pass is indicated. We like to have our linemen rush the passer from a high position and with the hands high above their heads. In our practice drill, we never permit our linemen to tackle our passers. We warn our tacklers against tackling the passer waist high permitting him to get the pass away. By rushing from a high position and with the hands high, the defensive linemen can do a good job of protecting against passes thrown in the flat since the vision of the passer is obstructed. The fact that the pass must be thrown over their hands ruins the timing of the pass because the passer has to step back to throw around the rushers.

We tell our linemen that they are just as much a part of the pass defense as our backfield. Any time a pass is longer than twenty or twenty-five feet it is entirely the fault of the rushing linemen. No thirty- or forty-yard passes should be completed if the linemen are doing a good job of rushing. Pass defense means the successful defensive play of eleven men not just the four backs and center. It is





The Riddell plastic helmet was first used by major football teams in 1941, five years before any other plastic helmet. During that time constant experiments have been conducted on the field and in the laboratory. From these reports and studies changes have been made to improve the helmet. Today through these changes, through improved knowledge of plastics and the use of tough, durable Tennessee Eastman Tenite we say this is the safest, strongest and most durable helmet made.

# *the Riddell Plastic Helmet*

The entire theory behind lighter, cooler, plastic helmets is made possible by the patented Riddell suspension. The suspension system of fitting headgears was introduced with the first Riddell plastic helmet and at that time was considered as revolutionary as the helmet itself. This is the same type suspension which was used in helmets and crash hats during the war. In no place does the head touch the crown of the helmet, thus providing safety, coolness and better acoustics. It is not too late to order this Riddell helmet from your Riddell dealer.



**JOHN T. RIDDELL, INC.**  
1259 N. WOOD ST. CHICAGO, ILLINOIS



**\$6.75**

Special Price to Schools — \$6.25  
This simply constructed, efficient  
knee brace can be adjusted to meet  
the requirements of any individual  
knee injury.

Stock this item  
Prompt application reduces hazard  
of permanent injury.

Patent No. 2,270,685

Purchase From Your Sporting  
Goods Dealer or From

**THE MILLER CO.**  
REINBECK, IOWA

Descriptive Literature Sent Upon Request



## Don't Let Them Lose to ATHLETE'S FOOT!

Underpinning is the watchword of all great coaches and athletes. That's why many leading Schools and Universities use the Dodge Way for prevention of Athlete's Foot.

Dissolve Alta-Co Powder in water—one pound to the gallon—place foot tube strategically in shower rooms.

- ALTA-CO kills many different species of common Athlete's Foot fungi and their tough spores in less than 60 seconds!

- Is non-irritating to the skin. Does not damage towels.

- Is stable in solution. Can be quickly checked by inexpensive Alta-Co Tester. Economical to use.

Write today for our 36-page illustrated booklet "ATHLETE'S FOOT—A Public Health Problem."

### Alta-Co. POWDER

The C. B. DODGE CO. Westport, Connecticut

the business of the linemen to make the passer throw quickly and while molested.

If we find that we cannot rush the passer, we concentrate on holding up eligible receivers. We often drive linemen back into the secondary to protect against completions. I believe, however, that it is usually better for the linemen to rush the passer than drop back into the secondary even though the linemen may be very fast and can cover about as well as the backfield men. A coach will consider his own personnel and consider what it can do best before deciding upon a style of defensive play against passes.

I have found good receivers who have a hard time holding on to an intercepted pass. I think the reason for this is that they do not get much practice in intercepting passes.

One of the first principles we give our boys in teaching pass defense is for every boy in the pass defense to break toward the ball when it is thrown regardless of where it is thrown.

We assign spots to which our different men in the pass defense are to retreat as the pass develops. I prefer a 6-2-1 defense rather than a 5-4-2 or a 6-3-2 defense, because there is always a safety man in my pass defense. I try not ever to get excited about the short flat passes. We are more concerned with the long ones which are likely to score. It is always best to let the boys know exactly what is expected of them. There is no defense which will break up all passes. It is my purpose to try to devise a defense which will always leave the players in a position to make a tackle if the pass is completed. A defensive man has as much right to the path of the ball as the offensive man, and it is important that the defenders know this.

My pass defense will vary somewhat with the team I am playing. The positions of the defensive men will vary according to the places where the opposition is likely to hit. The back three men will take the same positions against all opposition; but the line-backers and the end will vary their tactics and positions somewhat.

Putting the man in motion is the worst thing that has ever happened to defensive football. It is difficult to defend against passes thrown from this style of offense. We have to rely on our scout reports to determine whether to cover the flanker closely or not.

Diagram 12 illustrates a six-man line defense against the T formation with a man in motion.

### Defense Against the Kicking Game

There are two ways to defend against the kicking game. In one method stress is put on rushing the kicker; and in the other, emphasis is placed on returning the kick.

Diagram 13 illustrates the method we

use in rushing the kickers. We spend a little time every day teaching our boys how to rush the kicker and giving them practice in rushing the kicker. Players, as a rule, are inclined to run around blockers in an attempt to block the kick instead of running up the alley in front of the punter. The defensive linemen often head for the punter instead of a spot in front of him where he is to make contact with the ball. It is not sufficient for the players to be told *how* to rush the kicker. If they are to acquire good technique in rushing the kicker, they must do a great deal of work on the practice field in rushing the kicker.

Instead of running over, or attempting to run over, the blocker, a man attempting to rush the kicker will fake to the outside of the blocker and drive inside of him and up the alley. When all six linemen are given the assignment of rushing the kicker, the rest of the team must be on the alert to defend against a fake kick and run, or pass. In rushing the kicker, the guards should charge seams instead of men. The ends and tackles should charge at the shoulder of the backfield blockers and drive inside of them.

## for the Individual

(Continued from page 13)

Offensive end was used to back up the line when we employed a five-man line. We felt that we might be able to keep offensive linemen from releasing by slanting our middle linemen. Slanting linemen also helped us defend against trap plays. The right defensive end penetrated into the offensive backfield then worked to the out-

X X X X X X  
O O X O O O O

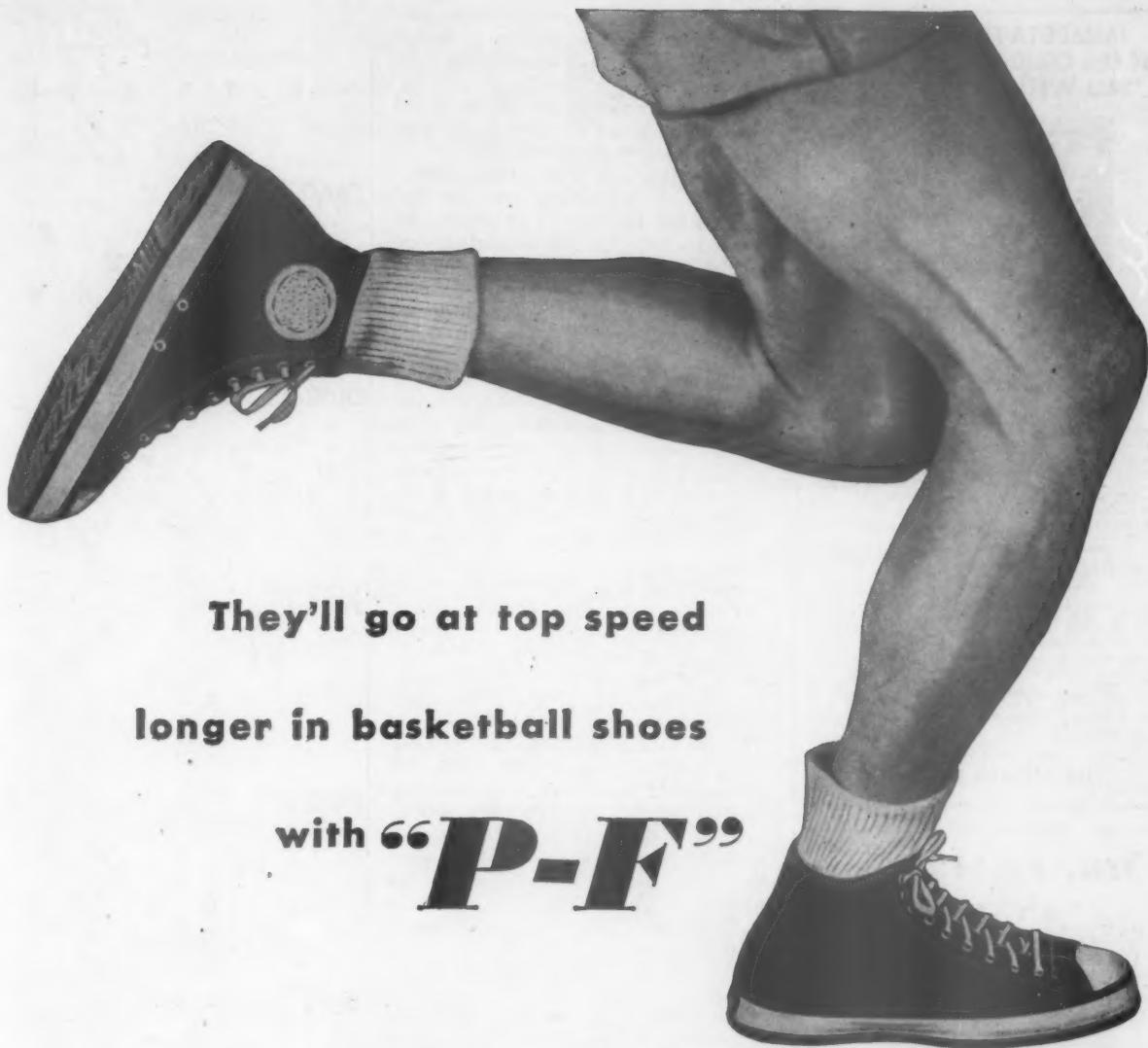
DIAG. 14

X X X X X X  
O O X O O O O

DIAG. 15

X X X X X X  
O O X O O O O

DIAG. 16



**They'll go at top speed**

**longer in basketball shoes**

with "P-F"

No wonder so many coaches specify basketball shoes with "P-F"! "P-F" is a special, patented, built-in feature that increases your team's "staying power," guards against flat feet, provides safe, correct, comfortable foot support. Every coach knows just how important these things are to his team. And remember, "P-F" Basketball Shoes are made only by B. F. Goodrich and Hood Rubber Company. Look at these Plus Features:

1. Molded tan, non-marking, positive-grip outsoles.
2. Sponge cushion insoles and heels.
3. Extra quality army duck loose-lined, ventilated uppers.
4. Ventilating eyelets.

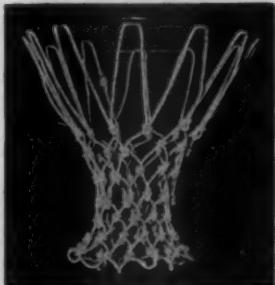
**"P-F" means Posture Foundation**

1. This rigid wedge keeps the bones of the foot in their natural, normal position.
2. This sponge rubber cushion protects the sensitive area of the foot.



**Specify basketball shoes with "P-F" exclusive with B. F. Goodrich and HOOD RUBBER CO.**

**IMMEDIATE DELIVERY  
of the ORIGINAL, FAMOUS  
"NO-WHIP BASK" NETS**



**\$4.50 per pair**

- Hand-knitted of extra heavy Marine Twine.
- Will outwear two pair of ordinary nets.
- Loops ends bound with tape.
- NARROWED IN MIDDLE TO MOMENTARILY RETARD DOWNWARD PROGRESS OF BALL. ELIMINATES "WHIPPING" OF THE BALL.
- Heavier twine gives greater visibility.
- Wide bottom assures ball dropping straight. Assures more accurate follow-up shots.
- Conforms with specifications of National Basketball Rules Committee. See Sec. 10, Rule 1, in Official Basketball Guide.

**BEWARE OF SUBSTITUTES!**

These imitation nets are using heavy weight twine but our net has the original copyrighted "NO-WHIP" feature. Look for the Black Label on the genuine "NO-WHIP" Net.

Used at Universities of Northwestern, New York, Yale, Toledo, Virginia, Michigan, Loyola, Ohio State, Madison Square Garden and many other colleges. Used at the State High School Final Basketball Tournaments in Ohio, Indiana, Illinois and Michigan. Adopted by the Professional Basketball Association of America. And many High Schools, Y.M.C.A.'s and Recreation Centers from Coast to Coast.

Order Today Direct From

**THE ATHLETIC SUPPLY CO.**  
330 SUPERIOR ST. TOLEDO 4, OHIO

**MR. COACH—**

**"ANALYZE"**

plays and players with graphical, statistical facts recorded

in

**THE FOOTBALL**

**VISUALIZER**

**SCORE BOOK**

**"PERMANIZE"**

your football season. Space for scoring of ten games. Simple, easy, and convenient for scouting. Bookkeeping will pay in touchdown dividends!!

**ORDER NOW**

send

**\$1.50 each, postage paid**

**THE  
FOOTBALL VISUALIZER  
Box 131-B, Flourtown, Pa.**

side if a wide play developed to his side. The defensive center protected against plays directed between the defensive right end and tackle.

We also overshifted our defense in the other direction and operated in the same manner.

Formerly, I was of the opinion that a coach should angle-charge his line only when he felt that he was definitely outmanned. It is my firm conviction that the only way to meet the T formation is to meet it with a balanced defense. Angle charging is all right if enough adjustment is made by the secondary to balance the defense.

Diagram 18 illustrates a defense against the Don Faurot T formation. This defense employs five men on each side of the center. It is important that all five men on each side of the center stay at home until the play is definitely known to develop elsewhere. I call this defense a stay-at-home defense. The men do not move unless the ball is coming straight at them, or until they know definitely where the ball is.

The two guards are given the responsibility of sealing off the middle of the line. The tackles are given the responsibility of protecting to their outside. The defensive ends play slow to the outside. The line-backers play the gap between the guards and tackles. I found that the defensive end play on the above formation was not too good. I think I improved it some by dropping the ends back as linebackers. The safety man on this formation more or less plays the ball. The halfbacks should never get any closer than ten yards to the side line in defending against the forward pass.

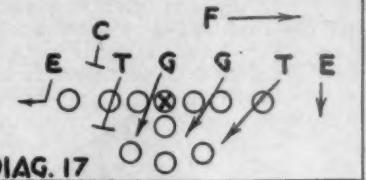
Five-man line defenses against the T are shown in Diagrams 19, 20 and 21.

The triple wing-back formation is definitely a passing formation. It has some running strength but not much. I think that a six-man line may be used effectively against it.

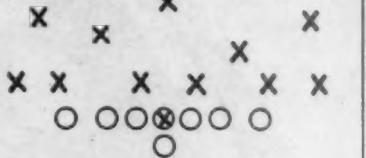
The main problem however, in defending against the triple is to stop the hook and short passes. It is evident that rushing will not play as important a part as coverage against this type of pass. Diagram 22 shows how I try to stop the short hook passes with five men sent down by the offense. We first attempt to defend against the longer passes and permit them to complete the short ones just over the line.

**The Army Defense**

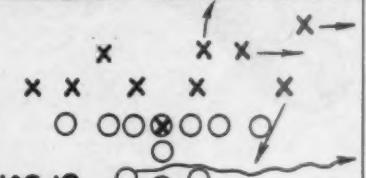
**O**N DEFENSE the linemen take a three-point stance with the rear foot farther back than on offense. The chief defensive maneuver is the "Shiver Charge." The hands are driven low and up under the offensive man's shoulders



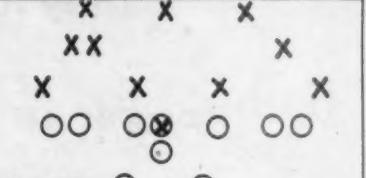
**DIAG. 17**



**DIAG. 18**



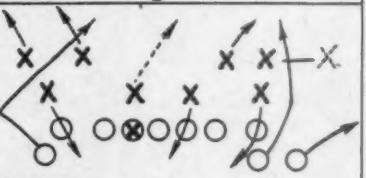
**DIAG. 19**



**DIAG. 20**



**DIAG. 21**



**DIAG. 22**

and followed up by fast foot action. One-step penetration is all that is wanted and then the defense slides to the ball-carrier.

Daily drills to develop the shiver are used on the charging machine and on live opponents. In the latter drill the coach gives commands for the defensive man to shift right or left after contact.

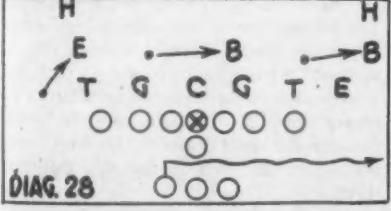
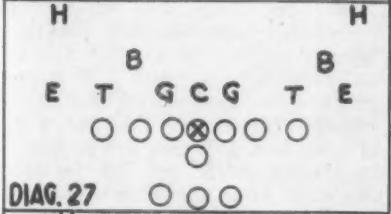
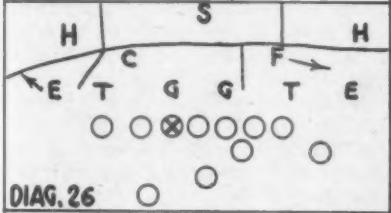
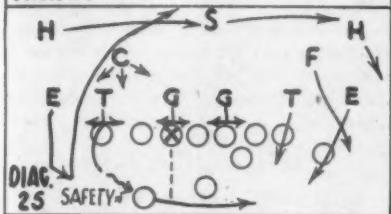
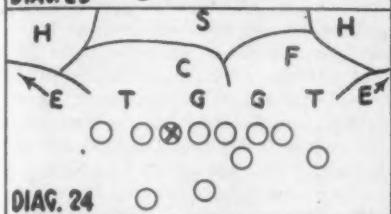
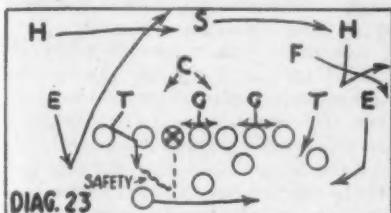
The Army defense is patterned on that used, by the University of Tennessee where General Bob Neyland and other Army men have developed a defensive system which over a period of years has one of the outstanding records of the country. It is based on the 6-2-2-1 defense with over-and under-shifts of the line in-

terspersed with occasional slant charges.

### The Overshifted Defense

The initial positions for the overshifted defense are shown in Diagram 23. The left end starts with a cross-over step and goes in at a 90-degree angle to a depth of three and a half yards. He faces squarely into the play with a low stance and with hands out in front to ward off blockers. If the play goes wide, he hand-fights outward and attempts to fade out with it. If the play goes in, he drives in from the side and attempts to tackle the ball-carrier.

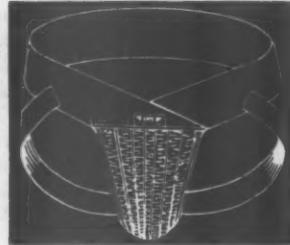
The left tackle plays with the outside



You can wear the original V-front supporter—the Olympic Champion Apex—and actually feel the difference from just any supporter. In action one side of the "V" pulls against the other and there's balance like the engineer's principle of stress offset by strain. Put one on—you'll find you've gotten rid of slipping and chafing forever and that there's constant comfort and support no matter what the sport. Ask for Olympic Champion by name.

#### OLYMPIC CHAMPION Apex No. 1

Patented\* V-front balanced construction. Mesh-type elastic pouch supporter.



#### OLYMPIC CHAMPION Apex No. 3

The same patented\* features as Apex No. 1 with a soft flannel pouch designed to hold a protective cup.



\*The Olympic Champion Apex basic Construction is protected by U. S. Pat. 2,301,066—no licenses have been granted any other manufacturer.

# OLYMPIC CHAMPION

The Balanced  
Action  
Supporter



Copyright 1947 The O-C Manufacturing Co.

# TAYLOR CLEATS



for  
LONGER WEAR  
BETTER FOOTING

- Hard rubber composition that withstands the tough, rugged play longer, even on hard-surface gridirons.
- 3 types . . . game, mud and practice . . . easily attached or changed quickly to suit field conditions.
- Fits any shoe, used by leading football shoe manufacturers and reconditioners throughout the country.
- Mud-resistant design keeps shoes free of clinging turf, thereby encouraging fast, foot-sure play.

Last year approximately 15 million *Taylor Football Cleats* dug deeper into the favor of coaches and players from coast to coast. Professionals and scholastics alike prefer the scientific design that gives the highest impact strength and longer wear. To help attain peak player performance, insist on *Taylor Football Cleats* from your shoe manufacturer, sporting goods dealer or reconditioner—or write us direct for a box of samples. Taylor Manufacturing Company, 3056 W. Meinecke Ave., Milwaukee 10, Wis.

## TAYLOR OF MILWAUKEE



Send for Order Blank "N"  
**PRINCETON**  
503 Market St., Phila. 6, Pa.



WE ARE  
AGAIN READY  
TO SERVE YOU  
Write for price list J to  
nearest office.  
**GRECO FENCING EQUIPMENT CO.**  
Los Angeles Office:  
10215 Scoville Ave.  
Sunland, Calif.  
New York Office:  
41 E. 22nd St.  
New York 10, N. Y.

foot up and takes a short step with it so that he is facing in toward the ball. If the wing-back blocks him, he fights out, if not he fights in. The guards take short steps with a shiver charge and slide to the play. The right tackle has the outside foot slightly advanced and plays the end with his hands. If the end blocks in, the tackle fights out; if not, the tackle fights in toward the center. His final duty, if the play goes to the opposite side, is to follow the play as safety man. The right end drives in at a 60-degree angle to a depth of three and a half yards. If the play comes his way, he attempts to slow it up so that he can get help behind him. If the play goes to the other side, he cuts back and goes down field as an extra safety man behind his own safety.

The fullback plays three to four yards behind the left guard. On plays to his side he keeps the ball-carrier one step outside. The center is one and a half yards back between right guard and tackle. He watches for cut-backs when the play goes to the opposite side. The left half is back six to eight yards and keeps the ball-carrier one step inside. As soon as a running play is obvious, he comes up rapidly and attempts to make the tackle on the line of scrimmage. The safety plays about fifteen yards back and rotates toward the ball-carrier to back up the halfback who has gone in for the tackle. The right half backs up the safety, rotating toward the play.

On pass defense the backs play a zone. The flats may be given to an opponent unless they prove dangerous, when the end on that side will drop back. See Diagram 24.

### The Undershifted Defense

Diagram 25 shows the initial positions of the undershifted defense. The left end goes in at a 45-degree angle for three and a half yards and is positioned facing the play. The left tackle drives into the offensive right end and closes the hole between him and the left guard. If the wing-back hits him, he fights out. The guards shiver-charge men directly opposite and slide into the play.

The right tackle plays the left end head-on and fights resistance. The right end goes in three and a half yards at a 90-degree angle and plays in a manner similar to the strong-side end on an overshift. The fullback meets the play in the off-tackle hole. If it goes out, he tries to cut through to the ball. The center is back three yards behind his right guard. He covers all backs from tackle to tackle. The left half favors the outside and comes up on the outside when a running play is indicated. Other backs rotate to play the farther men going deeper to back up those nearer the ball. The right end and tackle perform the same duties as the safety men when the ball goes to the side opposite them.

Diagram 26 shows a pass defense used with the undershift.

A Navy defense in 1945 that proved troublesome to Army is shown in Diagrams 27 and 28. Diagram 28 shows the shift from a 7-2-2 to a 6-3-2 when there was a man in motion.

### Penn's Single Wing

(Continued from page 80)

the knees slightly turned in. This position of the knees in, assures greater driving power than if the knees were allowed to point out. The toe of the rear foot is opposite the arch of the front foot.

The blocker hits with the shoulder, reinforced by the forearm. On contact there is a lift with a fast leg-drive.

When running interference the lineman pivots on the far foot and steps out with the foot nearest the hole. When running, his fists are turned in and his hands moved from chest to hip. The faster the hands go, the faster the feet go.

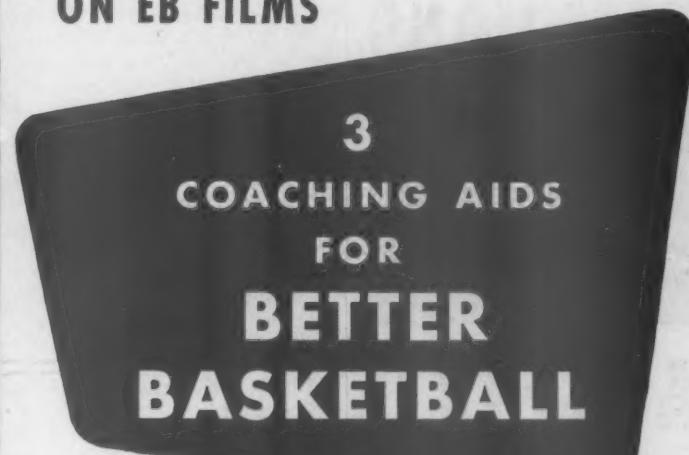
The huddle is not used. Signals are called by the quarterback in the following manner; as the referee spots the ball, the team groups near it and the quarterback calls the numbers. Upon hearing the formation number, the team immediately lines up left or right as indicated. The quarterback then looks over the defense and calls the play series. The play number is usually preceded by a key number which is changed from time to time. Each play goes on a certain snap number which must be learned with the play; for example end runs may go on the second number of the snap series and reverses may go on the third number. If the team is to go on set, the quarterback gives the play signal in the first two numbers as the ball is being spotted. The team lines up and the ball is snapped as the quarter is apparently getting ready to select the play.

If the defense shifts after the play number has been called, a check number is inserted in the series to cancel the play if it is impossible to run against the new defense.

Munger's plays are all based on the principle of every running play having the possibilities of a pass. Illustrations of this principle are indicated in Diagrams 2 and 3. Diagram 2 illustrates an in-and-out end run. The ball-carrier starts with a lead step of the right foot, then takes two more steps parallel to the scrimmage line; at this point he makes a head-and-shoulder fake as if he were going off tackle and then swings wide around the defensive end.

In Diagram 3 the ball-carrier takes his two steps, fakes in as on the end run and then drops back and passes. This run and pass has been one of Penn's most effective gainers.

## READY FOR YOU NOW ON EB FILMS



PRODUCED IN COLLABORATION  
WITH WILBUR JOHNS OF UCLA

These new EBFilms make basketball fundamentals easier to teach, easier to learn. They help you develop quickly your own basketball coaching techniques.

**BALL-HANDLING, SHOOTING, and DEFENSIVE FOOTWORK IN BASKETBALL** provide both coach and players with a unique aid in mastering the basic principles of good basketball, regardless of the style of play. Slow-motion and stop-motion shots permit detailed study of such important phases of the game as fingertip control, one-handed and two-handed passing and pass receiving. Close-ups and fast-action shots analyze stance, pivoting, and correct shooting trajectories. Commentary by Ken Carpenter keeps attention focused on key points.

Produced in collaboration with Wilbur Johns of UCLA, **BALL-HANDLING, SHOOTING, and DEFENSIVE FOOTWORK IN BASKETBALL** are authentic, forceful, and time-saving coaching tools for both high school and college teams. You can use them to coach several squads at once, or let individual players run them for their own extra practice.

Plan to use these films with your team. Ask to see a preview now. And remember . . . other new EBFilms are available in football, baseball, and track. Be sure to see them. Complete purchase and rental details on request.



BALL-HANDLING  
IN BASKETBALL



SHOOTING IN  
BASKETBALL



DEFENSIVE FOOT-  
WORK IN BASKETBALL



ENCYCLOPAEDIA BRITANNICA FILMS INC.

20 NORTH WACKER DRIVE

CHICAGO 6, ILLINOIS

# The CHOICE OF CHAMPIONS



## CASTELLO

Olympic Quality

## FENCING EQUIPMENT

Designed and manufactured by  
**JULIO M. CASTELLO**

Internationally Famous Fencing Master and coach of New York University's Championship Intercollegiate Fencing Teams in 1933, 1935, 1936, 1937, 1938, 1940, 1942 and 1947.

This is superior equipment guaranteed to be the best in quality and the lowest in price. Equally suited to the needs of beginners and experts.\*

### WEST POINT SURPLUS • FENCING JACKETS •

sizes 36 and 38. Originally designed for the Cadets at West Point. Top quality, heavy Army duck with full groin protection. Carefully tailored, a magnificent three-weapon jacket.

To encourage the sport and allow complete outfitting of teams, everywhere, we have set the unusually low price of

**\$4.00**

See your local sporting goods dealer  
or write directly to

**CASTELLO FENCING EQUIPMENT CO., INC.**

America's Oldest and Largest Importer and  
Manufacturer  
232 East 9th Street New York, N. Y.  
O'Reilly 7-5790

"Where a trained instructor is not available Castello's Theory and Practice of Fencing, the recognized text book on the subject, can be used with excellent results!"

Another run or pass combination is shown in Diagrams 4 and 5. The off-tackle thrust in Diagram 4 starts off similar to the end run but the ball-carrier actually cuts in on the second step. The play used to be run with a cut-in after four steps parallel to the scrimmage line, but the angle drive of the runner after two steps seems to add more power. The fullback's fake to take the end in, as on the in-and-out play, sets him up for the inside block of the blocking back.

The pass variation is a jump pass as the ball-carrier nears the scrimmage line. The pass usually goes to the short-side end across behind the defensive full or to the fullback out wide.

Against a five-man line there are no adjustments made in the blocking as used against a six. A new set of assignments which take advantage of the defensive set-up is used.

Diagram 6 shows the off-tackle play against a five-man line. A check play for a crashing end against this play is illustrated in Diagram 7.

Diagram 8 is a cut-back against a sliding guard.

Diagram 9 shows an outside trap on the guard who is wary of inside traps.

In the play shown in Diagram 10, a half-to-half reverse, the ball is handed forward. On the bootleg from this play, the tail-back passes the ball from the right to the left hand behind his back.

Diagram 11 is a deep reverse.

Diagram 12 is an off-tackle play from the fullback spin series.

The spinner steps forward with his right foot as he receives the ball, turning his back to the line and bringing his left foot around even with the right. As he hands the ball to the tail-back, he continues his spin on the left foot and hits into the line near the hole which the ball-carrier takes. Formerly the spinner faked back through center but the newer method has proved more effective as it draws the attention of the defensive men near the play hole.

Diagram 13 is a fullback spin play through tackle with a trap on the tackle.

Diagram 14 is the reverse from the fullback spin series. The wing-back starts with a pivot on the outside foot and steps toward the ball with the inside foot. Note that the blocking assignments are practically the same as those shown in Diagram 10.

## Training For Cross Country

By **Bill Easton**  
Track Coach, University of Kansas

THE GREAT outdoor sport of cross-country running develops in boys a sound basis for health, which involves strength, vitality and endurance, and will enable them to go through competition on natural vitality and have the power to recuperate quickly from their efforts. Cross-country running is an individual problem where, if individual discipline follows the pattern of clean living and regular habits, no injury will occur. Running is as old as history and is a natural activity of all youth.

I would advocate cross country for all boys who are going to participate in track whether they are trying to make the cross-country team or are preparing for indoor and outdoor track.

Size is no hindrance to the young fellow who wishes to run cross country. In fact a large number of America's finest distance men, Greg Rice of Notre Dame, Don Lash, Tom Deckard, and Mel Trutt of Indiana, have all been small men. Cross country is a sport that will give a number of smaller boys in high school an opportunity to compete and to make their letter awards.

Upon the opening of school a coach should make a call for distance men early. He should take their names, addresses,

and the full particulars concerning their nationality derivatives as well as the type of work that they have been doing the past summer.

This call should be followed by a thorough physical examination by the school physician. Here a complete check of age, height, weight, respiratory rate, pulse rate, (slow pulse rate is an indication of physical ability) nationality, and work background is important in placing the boys in groups to determine the type or amount of work they will be able to do.

We believe it is a good thing for a coach to present to the cross-country candidate at an early meeting the following suggestions. In these definite Do's and Don'ts, the boy gets an idea of what is expected of him and learns at the beginning that cross-country running is a sport that requires work.

Never quit. Always finish a race regardless of how it hurts. Break through

**M. E. "BILL" EASTON** is the new track and cross-country coach at the University of Kansas. Bill goes from Drake where he served for seven years as director of the famed Drake Relays. His 1946 and '47 teams were cross-country champions.

"fatigue" and have "guts". Learn to punish yourself when the going is toughest. Do not be last. Always beat some one man of the opposition. Never fall on the ground at the finish of a race. It indicates either a "show-off" or a boy who is not taking care of himself, hence, is not in condition.

Intend to be a leader, not a follower. Get up in front and stay there. Cross country is a team sport with the lowest score winning, so the closer to the front you can stay, the better your team score. You cannot win by running in the second wave.

Never pass a man slowly. Pass him with some "zip". This is good psychology as your opponent feels that you are fresh and have lots of stuff left. You may be just as tired as he is, but this will often slow him down, cause him to give up, and lag behind.

Learn pace, try constantly to improve your time and position in each race. Change pace out over the course. Don't run at the same rate of speed. Move out. Use a different set of muscles; it will place you at a higher level of speed and will be a relief from the grind of the pace. Make each hill or obstacle a challenge. On hills shorten your step, lean forward and use your arms well. Move out when you return to the flat. Going down hill, relax; allow your body to increase speed, but do not lose control.

Keep alert. The changing terrain of a good cross-country course involves thinking processes in action. It is the alert mind that wins.

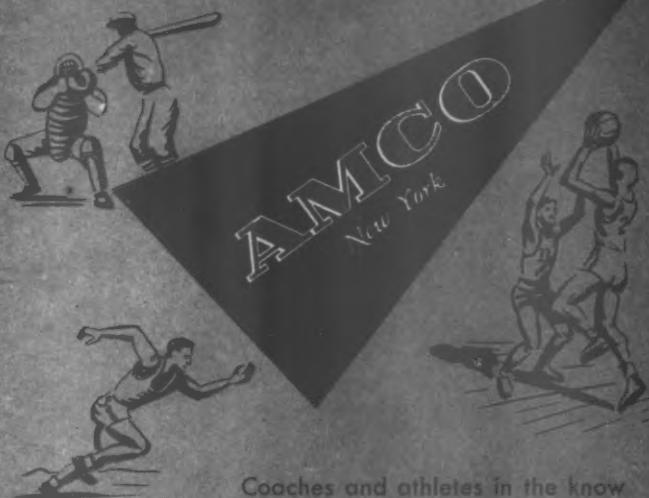
Training is a matter of self-discipline. The boy who really wants to be a fine cross-country and track man must train for himself. It takes a man to be a good track athlete.

*Diet Is Very Important.* Most distance men eat too much. It should be a matter of a good breakfast, a very light lunch and a good evening meal. Greasy foods should be especially avoided. Meat should be a part of the diet for the early part of the week and eliminated after Thursday's evening meal. Vegetables and fruits compose a base diet, invaluable in proper functioning of the body. Never eat eggs, regardless of how they are prepared, prior to a hard race. They are composed of a sulphur base that causes gas to form, especially in nervous stomachs.

What is eaten before the race, four or five hours prior, should relieve the hunger pangs. A diet of honey, mashed potatoes, toast buttered and hot, and weak tea with plenty of sugar serves the purpose in excellent fashion. These in very moderate portions should be sufficient to carry a runner through the meet in good shape.

Eating between meals is one of America's great habits. A good athlete in training will limit himself to eating only at meal time. His system then is accustomed to a

The *finest* in athletic apparel



Coaches and athletes in the know

ask for Amco, the blue-ribbon sports apparel line

that's tops in its class for crack tailoring, functional

design, trim, attractive lines. Write for the

name of the Amco dealer in your locality.



**AMCO**  
*Athletic Apparel Corporation*

4808 FOURTH AVENUE - BROOKLYN 20, N. Y.

## BINDERS for those

Who Save Their Athletic Journals

Specially prepared for the Athletic Journal, these binders hold an entire volume. You will always have the Journal in good condition when you need it for reference.

THE ATHLETIC JOURNAL

6858 Glenwood Ave.  
Chicago 26, Ill.

PRICE  
35 CENTS EACH  
3 FOR \$1.00



## OCEAN CHAMPION

TRADE MARK REG.

### RACING TRUNKS FEATHERWEIGHT RAYON

BLACK—ROYAL—SCARLET

\$24.00 A DOZEN

### DIVING TRUNKS

WHITE SATIN ELASTIC  
NO POCKETS OR LOOPS  
\$30.00 A DOZEN

### TERRY ROBES

WHITE  
SMALL, MEDIUM, LARGE  
\$5.50 EACH

SWIM FINS  
SEA DIVE MASKS  
KICKABOARDS  
NOSE CLIPS  
SUPPORTERS

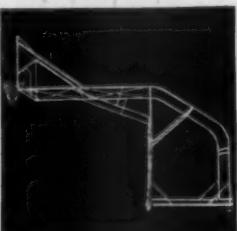
WATER POLO BALLS  
DIVING BRICKS  
FETCHING PUCKS  
RUBBER CAPS  
DISCOURAGERS

OCEAN POOL SUPPLY CO., 1140 Bway, N. Y. C. 1

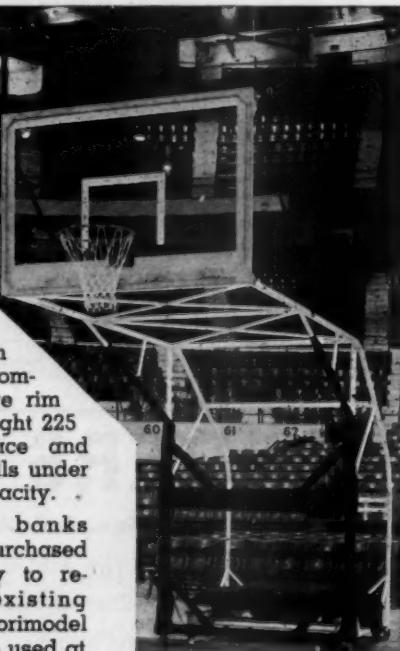
# MAXIMUM VISIBILITY

with  
**MORIMODEL**  
*Fullview Glass Banks*

The glass banks are made of one-half inch Herculite case hardened glass, bored to fit basket with 6 inches x 6 inches plate in rear. Complete with frames "no tie" orange rim basket and no whip baskets. Weight 225 pounds. Uniform rebound surface and lively rebound minimizes held balls under the basket. Increased seating capacity.



These banks may be purchased separately to replace existing banks. Morimodel banks are used at Cornell, Yale, Colorado University, Colorado A. & M., Denver and Pittsburgh.



One of the banks and backstops at the Boston Garden showing the maximum visibility afforded.  
Write for Prices and Information

628 WASHINGTON ST. **DICK MOREY, INC. ABINGTON, MASS.**

regulated diet at a regulated time and hence will function properly. Candy may be eaten immediately following the evening meal, if the athlete has a "sweet tooth." Cake and pie may be included in the diet except when the boy has a tendency to overdo the job. He should be particularly anxious to stay away from such foods the latter part of the week and never eat them in excess at any time.

*Regular Hours of Sleep.* Getting to bed by 9:30 or 10:00 o'clock is one of the most necessary habits to form. The boy who loses sleep, stays out late and insists that he is getting eight hours from twelve to eight is fooling only himself. This breaks down his reserve strength and he fails to have that "necessary thing" when the "chips are down." Nervous energy is built only in relaxed sleep, and this is especially necessary for proficient performances in cross country and track work.

*Workouts—Preliminary Work and Suggested Schedule.* I have saved this item until the last due to the fact that so many boys get the mistaken idea that intermittent workouts for a short length of time are all that is necessary. Daily supervised workouts, if only for a short period, mean a constant build-up toward a better performance. Through overdistance running, a boy learns relaxation, stride, pace, proper breathing and the finesse that make for a good track man. Speed work adds the "finish" touch.

The two items of relaxation and pace must be learned in the field of workouts. It is here in his distance running that he learns the ability to relax and at the same time develops a higher rate of speed over a longer period of time. This builds up a fine base for the quarter mile, half mile, mile and two mile. A boy who has participated in fall cross country will be strong in heart, lungs and legs. He will know his capacity, will be able to put out when called upon and will recover from a hard race more quickly. It has been found that the time of the recovery period is cut in half by the boy getting his sweat clothes on immediately after his race and walking until he is back to normal.

*Warm-ups.* For workouts, time trials and races, one of the most important items is to be thoroughly warmed up and have done calisthenics prior to this hard physical exertion. This means a thorough warm-up in which enough running is done to open the pores of the skin, relax the muscle structures, and break into the "second wind". This may be accomplished by setting up a warm-up schedule in which the boy jogs the early part and later moves into a faster pace completing the warm-up with fast work.

The idea behind warm-ups is to adjust the physical system of heart, lungs, and muscle structure to a higher level of locomotion. This can be done only by actually getting out and performing in the

- 1. Yellow-back Kangaroo or black top grain elk with reinforced leather vamp linings.
- 2. Outside counter pockets.
- 3. Web stayed throughout for no stretching.
- 4. Telescopic latched eyelets.
- 5. Full bend leather soles.
- 6. Reinforced back stitching.
- 7. Goodyear Welt construction.
- 8. Hyde's new patent - lock football assembly.

this New TRACK SHOE, too!

can only be truly appreciated when you try it on. Made in two leathers . . . kangaroo and soft mellow calf. Light . . . Airy . . . Feather-weight. Feel that soft, snug, glove-like fitting heel.



## How to Have PERFECT GYM FLOORS!

### PERMA-SEAL

Made of Tung Oil and Phenolic Resins. Fills and seals the floor with a non-porous, satin-like shock-proof surface that cuts floor upkeep costs to a fraction. Easily applied with lamb's wool applicator — non-streaking — odorless — low in cost — economical to use.

Approved for heavy duty durability by  
Maple Flooring Manufacturers Association.

### PERMA-GYM-SEAL

Formulated of Bakelite Resin and Tung Oil. Gives a non-slip, quick-stop, fast-start, transparent, resilient surface which diffuses light. Won't crack or break up — not affected by alkali, most acids, oil, water, grease, or body perspiration — easily applied — ideal for all wood, linoleum or cork floors.

Approved by Maple Flooring Manufacturers Association.

### SKIDPROOF

Eliminates slipping. Contains no wax. Dries quickly to a scuff-proof, hard bright gloss that outlasts wax 3 to 5 times. Won't wash off, crack or check. Odorless. Has no chemical reaction on wood, linoleum, rubber, asphalt, terrazzo or tile floor. One gallon covers 2000 square feet — low in cost — easy to use.

Tested and approved by Underwriters Laboratories.



1

Seal the pores of your gym floor with Perma-Seal.

Actually becoming a part of the wood, Perma-Seal penetrates every pore of the floor to form a hard resinous surface that prevents attack from wear, dirt, stains and moisture, and keeps your floors new indefinitely.

2

Give them a high-gloss, durable surface with Perma-Gym-Seal.

3

Providing the toughest surface finish known, Perma-Gym-Seal is like a coat of resilient armor that resists rubber-burns, scuffing, oil, alcohol, acids, sub-zero temperatures and boiling water.

3

Keep them beautiful, shining and safe with Skidproof.

An emulsified plastic top maintenance finish, Skidproof protects and preserves against wear and surface damage, gives floors an easy-to-maintain, long-wearing safety surface that guards against dangerous slips and falls.

Write on school letterhead for FREE informative, brochure that tells how to keep floors new, safe, beautiful.



CONSOLIDATED LABORATORIES, DIV.  
CONSOLIDATED CHEMICAL LABORATORIES, INC.  
1470 S. VANDENBERG, ST. LOUIS 10, MO.

manner that a boy will perform in the race. A set rule is that "the runner should run as hard in the latter part of his warm-up as he will have to run at any time in the race."

#### Calisthenics

A good running warm-up should be followed by twisting and stretching exercises prior to each workout. We find heavy, hard calisthenics following the day's workout valuable. We suggest a list of four or five calisthenics in cross-country and track work plus medicine ball and pulleys, if they are available. Our calisthenics are:

1. A body twist exercise (that prevents gas pains) with hands above the head and feet spread apart. The boy should twist down and touch his toes and at the peak of the turn reach as high as he can. Ten in each direction.

2. Leg lifts in which the legs are brought up on the count of one, spread apart on the count of two, brought back together on the count of three, lowered to within six inches of the ground on the count of four, spread on the count of five, brought together on the count of six. This should be repeated until a boy can do at least twenty. This is a very difficult exercise for young boys. The number will have to be gradually increased from three

or four at the start as the boys grow stronger. Running is an abdominal and frontal rectus femoris muscle action. This exercise builds these muscle sections.

3. This exercise, which we call "knee touches," is done in a prone position. The hands are placed on the thighs and on a fast count of 1-2, the boy reaches down and touches his knees. This sounds very simple but is one of the most difficult exercises to execute for any great number of times. The hands should slide back and forth on the tops of the thighs and the count should be fast, 1-2, 1-2; when a boy can do from twenty to twenty-five in succession it is evident that he has no trouble with breathing.

4. On alternate days push-ups should be done fifteen to twenty times and pull-ups on the horizontal bar ten to fifteen times.

#### Workout Schedule

For the first two or three weeks candidates should run an easy overdistance with a change in pace and walking. They should be cautioned against doing any spring work. Early sprinting is the reason for so many shin splints. This should be emphasized to all boys. Leaders should be appointed to see that no sprint work is done over the course. Up-and-down hill work is very important as a

background for distance running. Sustained effort becomes monotonous, so a course should be laid out over a scenic route, or courses should be changed. This will break the monotony and will encourage greater effort. After this preliminary work over a two or three-week period, a schedule of supervised workouts should follow.

**Monday:** Three or four miles in which the pace is varied by the leader. He should keep the boys moving over the full distance so there is a background of sustained pressure for future use. If there are no sore legs in the group, the day's workout may be completed with a pace quarter around 70 to 75 seconds. This will depend upon the boys. Later in the training program three or four 110's at an increasing pace for each 110, may be included in Monday's workout the first one at fifteen or sixteen seconds and the pace increased on each succeeding one. It will be found this maintains speed with over-distance and will build speed for later work in individual events.

**Tuesday:** This is a day for a "split" workout. After a good warm-up, work should be taken over two separate miles; the first mile around five minutes (under 5:30); after eight or ten minutes for recovery, the second mile should be at an increased pace anywhere between 4:40 and 4:50 (under five minutes) depending of



# MOSBY BOOKS

## *On Health and Physical Education*

#### Just Released!

### SCHOOL HEALTH and HEALTH EDUCATION

by C. E. TURNER, Ed. M., D.Sc., Dr. P. H. Emeritus, Professor of Public Health, Massachusetts Institute of Technology. With the Editorial Assistance of C. Morley Sellery, M.D., Director of School Health Service, Los Angeles City Schools.

457 Pages.....**PRICE, \$3.50**

Realizing that the development of pupil health—as well as knowledge, personality and power—is to a large extent in the teacher's hands, Dr. Turner presents a new and fresh picture of the modern school health program from the standpoint of its opportunities for health education. It is written for the course in School Health or in Health Education in the Teachers' College and for the teachers in service. Methods, Curriculum building, source materials and other phases of health education are presented in detail.

It covers the activities of physicians, nurses, dentists and dental hygienists, and others who contribute to health programs. Its scope is broad and authoritative and its use will improve health education—as well as relations between directors and personnel.

#### New Second Edition!

### WORKBOOK FOR PHYSICAL EDUCATION

by MAE IDDINS, A.B., B.P.E., Instructor in Physical Education, Carson-Newman College, Jefferson City, Tennessee. 2nd Edition.

162 pages, illustrated.....**PRICE, \$2.25**

This workbook gives women students in college a brief introduction to the various sports and provides a challenge to them to continue their study of the sports in which they are particularly interested. The sports are arranged to meet the needs of the physical education program in school or college and are presented according to the sports suited for the different seasons.

In this new Second Edition, chapters have been added on STRENGTH TEST, ACTIVITIES WITH MUSIC, OBSTACLE RACES, and RIFLE SHOOTING. There has also been considerable rearrangement and combination of chapters.

# *The C. V. MOSBY Company*

3207 WASHINGTON BOULEVARD

ST. LOUIS 3, MISSOURI

course, upon the boy. The ability of each runner must be taken into consideration, and his time assignment for each mile governed accordingly. His assignment should be made within his reach. The psychology of accomplishment is a great factor in building a champion. For instance, if the boy is a 4:40 miler he should run his first mile in approximately 5:10 to 5:15 minutes; on his second, he should cut his time down to approximately his best performance. The day's workout should be completed with easy sprint work, two 220's.

**Wednesday:** The workout is a happy medium between overdistance and speed work. The emphasis should be primarily on underdistance, a mile and a quarter to a mile and a half, at a faster pace than the boys will be running their two miles. This workout should be followed with a three fourths mile or a half mile, so that the boys may add their total time and see what a fast two miles they are able to run. It is good psychology and gives them something toward which to work. We find it best to set the time and pace up on the mile and a half. We give them about ten to fifteen minutes and then run their half mile on the track so that they can actually judge pace for the half mile as well as realize that they are capable of a much better race than they have been running. As the season advances it is always a good idea to have the boys run three or four 110's as outlined for Monday.

**Thursday:** As the day of the meet approaches, the amount of overdistance should be decreased. It should be used as a warm-up, and the amount of speed work should be increased. Various types of workouts will get practically the same results, but a workout will show good results by first letting the boys jog in sweat clothes over the two-mile course, easily relaxed, having fun, and then have them pace quarters on the track—three or four at pace speed for a good high school mile :65 to :67 seconds, depending upon the boys. Here again a coach should judge their ability and run their pace quarters accordingly.

**Friday:** A day of rest when the meet is on Saturday. Some boys will want to take a workout and if they do, they should jog easily with just a bit of pace and one or two easy 110's. This, with light calisthenics, will relax them. The shower should be held at a tepid temperature.

The squad should meet for instructions. In these, the men should be warned not to overeat on Friday night as the two or three meals preceding the meet are very important. They should not eat greasy foods, sauces, highly seasoned materials and never try any new foods. They should get to bed at an hour that they can sleep and get up early enough to eat four or five hours prior to running. They should stay off of their feet as much as possible.

(Continued on page 58)



## TESTED and APPROVED

★ No Matter what type of floors you may have in your school . . . Hillyards have Treatments and Maintenance Materials that protect their surface. Call or wire us today for the Hillyard Floor Treatment Specialist in your locality, he will gladly give advice on eliminating any floor treatment, maintenance or sanitation problem.

★ Send for the Free NEW Hillyard "Floor Job Specifications," full of real information on proper Floor Maintenance and Sanitation. Write for your FREE copy today.

**HILLYARD SALES CO's**

470 ALABAMA ST. SAN FRANCISCO 10, CALIF. DISTRIBUTORS HILLYARD CHEMICAL CO., ST. JOSEPH MO. 1547 BROADWAY NEW YORK, N.Y.

### LISTEN COACH! A WINNING TEAM DESERVES THE BEST! The Quality Is Up!—But the Price Is Down Kahnfast Satin Lined Warm-up Jackets

#SJ Heavyweight Kahnfast satin—Kashmere lined—set in sleeve, slash pockets—contrast color—Solid or two tone heavy weight cotton knit trim on collar, cuffs, and bottom—snaps or buttons..... \$945 EACH

All Colors Available—Immediate Delivery

#### BASKETBALL UNIFORMS

#RJBT—Medium weight Lustre Rayon reinforced plated Basketball Jerseys—contrast color—neck and arm trim.....

\$195 EACH

#BS—Kahnfast Satin Basketball pants—with full cut, large swinging hip pads—Rustproof buckles—contrast color—side and bottom braid.....

\$295 EACH

All Colors Available—Immediate Delivery

The above can be had with striped barber pole inserts. Details on request—swatches—samples and Write for complete confidential school price lists of our ATHLETIC APPAREL • AWARD SWEATERS • CHENILLE AND FELT LETTERS, ETC

**THE GREENE COMPANY**

New York City 10, New York

175 Fifth Avenue

# The Over-balanced Attack

By Gilbert Wilson

Basketball Coach, High School, Iowa City, Iowa

GILBERT WILSON, winner of the 1946 state championship in Iowa and author of the article on Rebounding in the September 1946 issue is starting his third year as coach of the Iowa City High School.

EVER since my initial season of basketball coaching, I have been looking for an offensive pattern which, with a few variations, might be used with almost equal effectiveness against a man-for-man or a zone defense. We find that we have been meeting almost as many teams that use a zone defense as those employing the man-for-man defense. In fact, we have met teams that employ both defenses during the course of a game.

I am not saying that the offense which I am about to describe is the answer to an all-purpose offense. I will say, however, that we have been very successful in using this offensive formation against both a man-for-man and a zone defense.

The player's floor positions are indicated in Diagram 1. We call X3 the up-forward and X2 the corner-forward, X4 the sideline guard and X5 the middle-guard. The set-up may overload either side of the court.

It is impossible to have an effective continuity if each player must return to his original position whenever a particular play does not bring the desired result. It is essential, therefore, that all players know the duties of each offensive position. This may be accomplished by various drills, each drill involving a specific play of the pattern. Diagram 2 illustrates such a drill.

Diagram 3 illustrates one of our fundamental plays against a man-for-man defense. X4 passes to X3 and screens on the inside. X3 passes to the pivot X1. X1 returns the pass to X3 as he cuts off the pivot or he may pass to X2, who has delayed his cut by employing change-of-direction tactics. In case a scoring opportunity does not materialize, X1 passes the ball out to X5 and the players assume positions on the other side of the court.

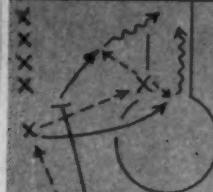
The play, illustrated in Diagram 4, is almost identical to the play shown in Diagram 3. This play is used against a zone defense with emphasis placed on the screen roll of X4. X2 should cut directly toward the basket so as to clear the area for a set shot by X4. X2 and X3 also may find good shooting opportunities.

Diagram 5 illustrates another play which has several options. X4 passes to X3 and cuts to the outside. X3 passes to the pivot X1. X4 continues his break toward the basket and receives a pass from X1 or he may screen for X2, who receives the pass from X1. X3 also has a good scoring opportunity. This play also has brought us baskets against a zone defense. X2 is often open for a set-shot about fifteen feet from the basket.

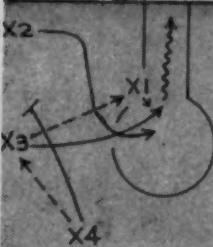
The play illustrated in Diagram 5 may, with a minor variation, be effective against zone defenses. Such a play is illustrated in Diagram 6. X4 passes to X3 and cuts to the outside. X3 passes to the pivot X1. Both X2 and X3 cut toward the basket to draw the defensive men toward the basket. X1 then passes to X4 who has a set-shot opportunity. If the defense concentrates on stopping the set-shot by X4, X2 or X3 will often be open to receive the pass from X1. There are numerous other scoring possibilities for use against the man-for-man and zone defenses which can easily be discovered by setting up the offensive pattern. Alertness on the part of X5, the middle-guard, will often result in his securing baskets by breaking down the open side of the court.

X4 X5

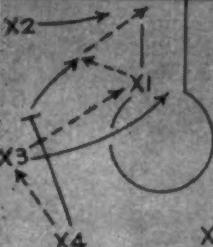
DIAG. 1



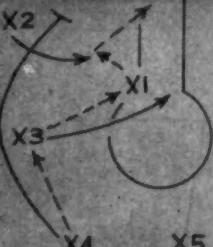
DIAG. 2



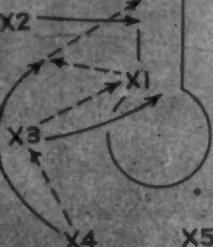
DIAG. 3



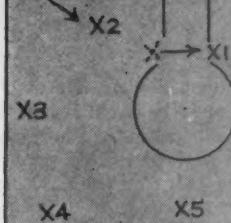
DIAG. 4



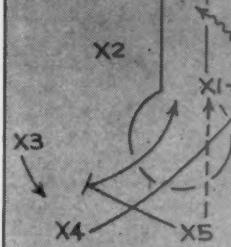
DIAG. 5



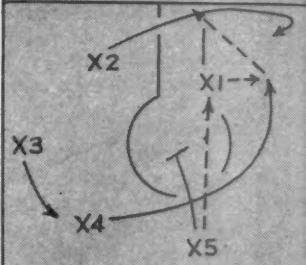
DIAG. 6



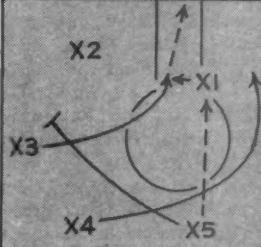
DIAG. 7



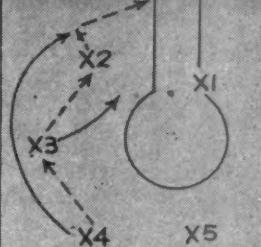
DIAG. 8



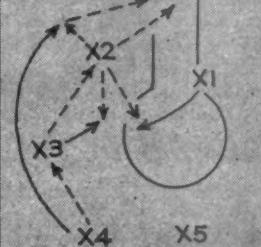
DIAG. 9



DIAG. 10



DIAG. 11



DIAG. 12

An overbalanced double pivot attack is easily set up by simply moving the positions of our corner forward and our center as shown in Diagram 7. X2 moves to a position about ten feet from the end line and about twelve feet from the side line while X1 moves across to the other side of the free-throw lane. When players assume these positions against a zone defense, there is a tendency for the defensive players to align themselves with the offensive players in a man-for-man fashion. It is possible, therefore, to use man-for-man plays. Some of the plays will have to be slightly modified for use against the various defenses.

Diagram 8 illustrates a play between the guards and the center. It should be effective if the guards are fast. X5 passes to X1 and screens for X4 who cuts hard off the screen and breaks past X1 on the outside. Following his screen, X5 rolls and cuts either down the middle or to the outside of X1. If the defense is switching, he is usually in a good scoring position. X1 may pass either to X4 or X5 for a shot.

The play illustrated in Diagram 8 is slightly modified for use against zone defenses, as shown in Diagram 9. X5 passes to X1 and moves to a position just inside the free-throw circle; his duty is to keep the defensive left forward occupied. X4 cuts to a position outside of X1 and receives the ball from X1. X4 may either shoot or pass to X2 who has moved over to the corner; X2 will often be open for unmolested shots along the end line.

Diagram 10 is a play similar to the play described in Diagram 8. X5 passes to X1 and screens for both X4 and X3. The screen for X4 is a running screen so X4 should be alert to cut fast at the opportune time. X1 may pass to either X4, who cuts down the outside, or to X3, who cuts down the middle.

Diagram 11 illustrates a guard-around play as used against a man-for-man defense. X4 passes to X3 and cuts to the outside, thus screening his man on X3. X3 passes to X2, who in turn passes to X4, cutting in toward the basket for a shot. In case the defense switches, X3 often has a good scoring opportunity by cutting directly for the basket as soon as the defensive guard switches.

In Diagram 12, the guard-around play is illustrated as used against a zone defense. X4 passes to X3 and cuts to the outside. X3 passes to X2. In case X4 is open, X2 passes him the ball for the shot. In case X4 is covered, X2 should be alert to pass to either X1 or X3, who may be open for shots, or he may make a pivot shot himself. Quite often the defensive men in the back court are outnumbered, and good shots may be obtained by quick, accurate passing.

Diagrams 13 to 17 illustrate plays for use against man-for-man defenses. No attempt is made to modify or change the play for use against a zone defense. How-

# TRAINING TOOLS -

COACHES find they get better results from training when they use film aids. Their players learn faster, remember longer, and strive to emulate championship play.



EACH of the film series described below was specifically designed to provide the high school and college coach with a helpful training tool.

## "WEST POINT Championship Football"

6 instructional films — 16mm sound — 55 minutes running time. Featuring BLANCHARD AND DAVIS, the famed West Point team demonstrates the FUNDAMENTALS OF FOOTBALL.

The first two Army elevens, with BLANCHARD, DAVIS, TUCKER and GREEN, show how to play a better and safer game.

Every important phase of the game is made clear. Plays and basic formations are presented and analyzed. Every position on the offense and defense is demonstrated and explained. One of the greatest teams ever to take the field shows your men how to play football and what it takes to win.

## "PLAY Championship Basketball"

6 instructional films — 16mm sound — 62 minutes running time. The twice-national championship Oklahoma A & M demonstrates the FUNDAMENTALS OF BASKETBALL.

Coach Henry Iba and his Aggies, with Bob Kurland, All-America center, show how to improve individual and team play.

This practical training tool demonstrates for your team every major aspect and skill of winning basketball.

Individual and team offense and defense, styles of play, and drills are presented and analyzed under the expert direction of Coach Iba.

Cost of each subject, complete: \$150.00.  
Rental of each subject: Daily: \$12.50;  
Weekly: \$25.00.

(Rental may be applied toward purchase).



Write for descriptive folder on these and other sports films.

**ASSOCIATION FILMS**  
(Y. M. C. A. MOTION PICTURE BUREAU)  
NEW YORK 17 CHICAGO 2 SAN FRANCISCO 2 DALLAS 5  
317 MADISON AVE. 19 SO. LA SALLE ST. 351 TURK ST. 6608 COLE AVENUE

**SWEATER NEWS**

In a fine array of school and award sweaters. Made from superior 100% virgin and worsted woolen yarns.

- \*Coat Sweaters
- \*Crew Neck
- \*V Neck
- \*Round Neck
- Baby shaker—Heavy shaker—Jersey knit  
From \$6.00 and up  
Write for sweater catalog  
SA

**NATIONAL SCHOOLCRAFTERS**  
19 Park Place New York 7, N. Y.

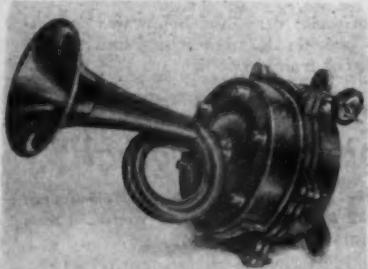
**National**  
headquarters for  
**GYM MATS**

Don't buy until you see our free  
Illustrated catalog. Write Today!

**National**  
SPORTS EQUIPMENT CO.  
FOND DU LAC, WISCONSIN  
ALMOST A HALF CENTURY OF LEADERSHIP

# FAIR PLAY SCOREBOARDS

Toot their own horn



This year the 1948 FAIR PLAY timers and scoreboards will toot a new powerful super duper. Here is a horn loud enough to be heard above the cheering of the noisiest crowd. Standard on the 1948 FAIR PLAY scoreboards, but it may be purchased to replace unsatisfactory horns on any make of scoreboard.

Write today for new circulars.

DEPT. A. J.

**Fair Play Mfg. Co.**  
WEST DES MOINES IOWA

## COACHES! Instructors!



These Sturdy  
PAPER  
SLIPPERS  
Give  
Positive

**Foot Protection**  
in LOCKER ROOMS,  
SHOWERS & POOLS

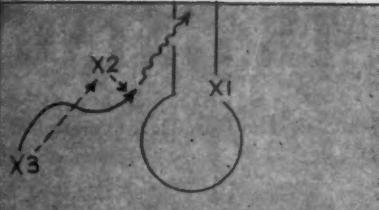
Sani-Treads help  
prevent the spread  
of foot diseases.  
These are the  
original.

tried-and-true, water-resistant  
paper slippers . . . used for 25  
years. Inexpensive; one size fits  
all. Send for samples and low  
prices. Sani-Tread Co., Inc., 1732  
Elmwood Ave., Buffalo 7, New  
York.

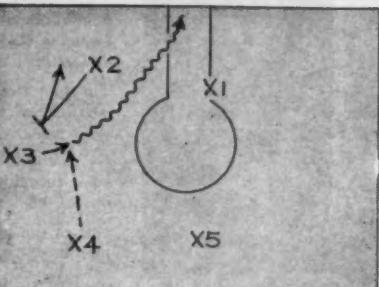


DISPENSER  
RACKS  
Available

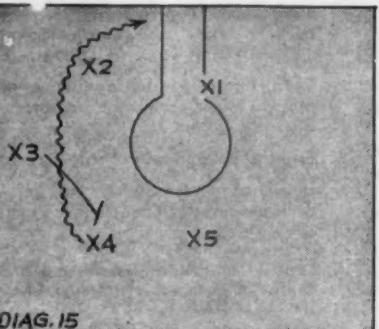
**SANI-TREADS**



DIAG. 13



DIAG. 14



DIAG. 15

Diagram 14 illustrates a simple pick-off screen. X2 screens for X3. X4 passes to X3 who dribbles in for the shot.

Diagram 15 illustrates another pick-off screen. X3 screens for X4 who dribbles in for the shot. In case X4 does not become free on the initial screen, he may attempt to screen his man off on X2. In case the defense switches, X4 quickly passes to X3 who has screened and rolled out of his screen toward the basket.

It seems apparent that this particular offense will prove more effective with teams of better-than-average height. The center and the forwards should be tall. The guards should be clever ball-handlers and passers. The players should know how to play every position.

## Training For Cross Country

(Continued from page 55)

They should check their equipment, shoe strings, and the meeting place and time for the meet or leaving for the meet.

**Saturday:** This is a most important day. It is always a good idea to get to the place of the meet two hours ahead of the time scheduled for the meet, for a warm-up and rub downs. A coach should always make it a "must" to take the boys over the course which they are going to run. This allows him an opportunity to discuss with them the terrain, fast and slow spots. The calisthenics used just prior to running should be twisting and stretching only. The twisting exercises will prevent gas pains in the lower abdomen, and stretching exercises will assist in the loosening-up process. Push-ups, leg-lifts and knee-touches should not be used. These tend to tighten up the muscle structure and should be used only after workout periods during the week.

The following instructions that a coach has given his runners should then be heeded. Leave the starting mark fast. Get out in front and make your opponent come up to beat you. If one of them does pass you, hang right on him. Do not let his passing pace bother you. Await the opportunity, then pass him fast and move out. Changing pace tends to "hop" you up and you feel better.

Remember this is a team sport. The score is based on the position of the first five men to finish. But, the position of your sixth and seventh man is equally important. In big meets the position of these two men often determines the difference. Keep your men "bunched" because the difference of one position will lose a meet. Keep relaxed and always be ready to "pour-it-on" as you near the "pay dirt" line.

Competition is the essence of our great American sports program and the laurel wreath is only to the "winner" in these United States.

# Unique in 1921...

...when the Michigan State College Basketball team was first to use a colored warmup garment made of a woolen fabric—developed by O'Shea.



## ...Essential Today...

...because this now famous O'Shea U-CLOTH warmup garment is recognized in athletic circles as one of the finest and longest-wearing garments manufactured. It's popular because it is the finest in use today. It's made of all-wool yarn, closely knit to retain the warmth generated by a player in his pre-game workout—a feature that's popular with coaches and athletes everywhere!

SAY *O'Shea*

O'SHEA KNITTING MILLS  
A Division of Wilson Sporting Goods Co.  
1860 NORTH WILMOT AVENUE  
CHICAGO 47, ILLINOIS



THE GAME'S WORST PENALTY—  
**"BENCHED FOR  
BRUISES"!**



The longest periods of "time out"—in any game—are caused by injuries. Bruises, sprains, strains!

That's why more and more trainers are turning to Antiphlogistine. This ready-to-use medicated poultice helps shorten your athletes' stay on the bench.

A comfortably hot Antiphlogistine

pack supplies valuable Moisit Heat for many hours. Helps relieve pain, swelling and soreness—without interrupting the athlete's rest.

Now, more than ever, you need Antiphlogistine. Good athletes are scarce. So keep Antiphlogistine ready—for the most common injuries.

Write in for Your FREE Booklet—"Athletic Injuries"

**ANTIPHLOGISTINE HELPS YOU "KEEP 'EM IN THE GAME"**

**Antiphlogistine**

The Denver Chemical Mfg. Co., Inc.  
New York 13, N. Y.



Since 1772

THE MAKERS OF THE WORLD'S  
FINEST FENCING EQUIPMENT

FOILS • SABRES • EPEES  
MASKS • GLOVES

•  
**WILKINSON**  
**SWORD SALES CORP.**

315 Broadway New York 7, N. Y.



One Man Folds It!  
One Minute Does It!  
Not Quite Magic But  
NISSEN



The 1948 "All-One"  
**TRAMPOLINE**

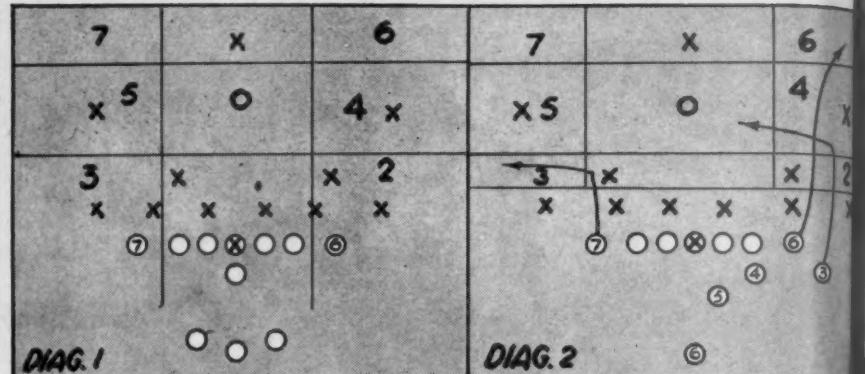
Advanced Flashfold Model with  
Exclusive Nissen Roll-Out Feature.  
Suitable indoors and outdoors.

LIGHTER—STURDIER—  
LONGER—WIDER—  
CLOSER TO GYM FLOOR—  
QUICKLY MOVED AND  
STORED FLAT BY GYM  
WALL.

One Man Does It All!  
\$280.00 F.O.B., Cedar Rapids, Ia.

Write for FREE LITERATURE

**NISSEN TRAMPOLINE**  
200 A Ave. N.W., Cedar Rapids, Iowa



## Numbering Zones

**N**UMBERING defensive zones to aid the passing attack has become commonplace during the last few years. This system correlates very well with the system of numbering offensive holes even to the right and odd to the left. The right end is numbered 6 and the left end is numbered 7.

A common pass pattern against the 6-2-2-1 defense is shown from the single-wing formation in Diagram 2. We call this pattern 83.

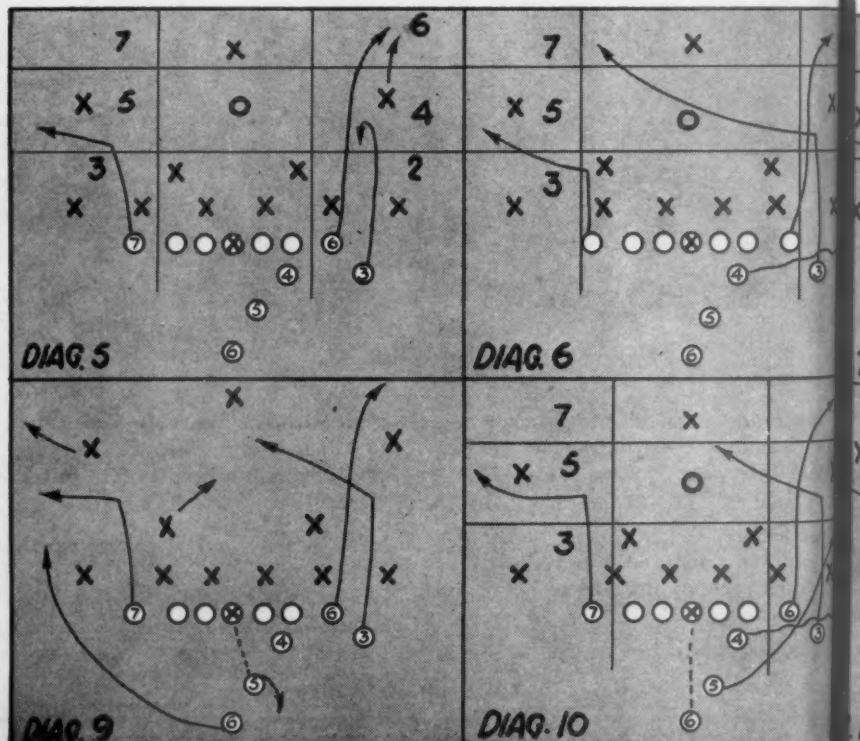
If the quarterback should notice that the left defensive line-backer is dropping back to help cover the wing-back, he would call for 83-72 which would mean the 83-pass pattern with the left end going into the 2 zone.

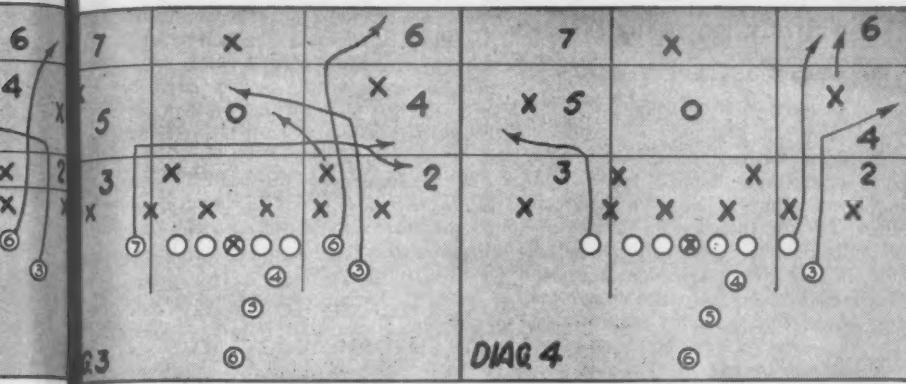
If the quarterback should notice that the left defensive halfback is going deep with the end he would call for 83-34 which would send the wing-back out wide into the 4 zone.

If the quarterback desires to have the wing-back hook in the 4 zone he would call 83-34 hook.

This method of zoning the defensive secondary gives the quarterback a means of taking advantage of the opponents' methods of coverage, increasing the effectiveness of the passing attack. It is very easily learned.

The first number called is the pass pattern. The second called is the change in the pass pattern to take advantage of the opponents' method of coverage. The sec-





DIAG. 4

## es for a Passing Attack

ond number affects only one man. The other players carry out their usual assignments according to the pattern called.

All pass patterns ending in 3 send three men down the field. These may be called 73-83-93. These are the basic patterns. All patterns ending in 4 send four men down the field for passes. These may be called 74-84-94. Those patterns ending in 2 would send two men down the field. Those ending in 5 would send five men down the field as pass receivers.

On the 84 pattern each player does the same thing as on 83 with the exception of the 4 back who goes in motion to the right before the snap of the ball unless he is told to go into some other zone by the quarterback.

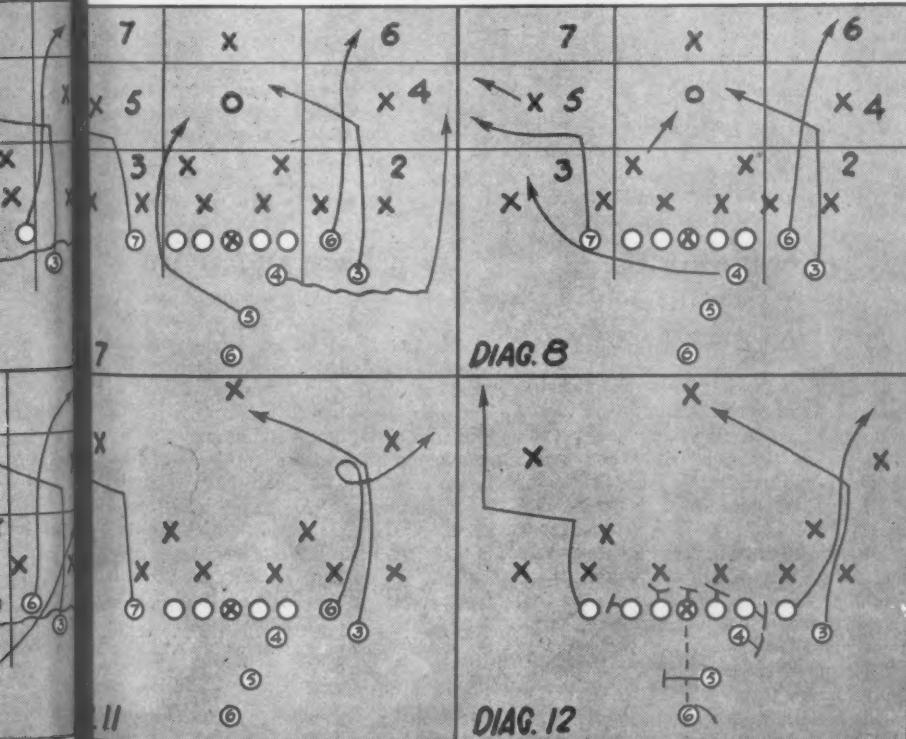
By Ross J. Shaw  
Morrill, Nebraska, High School

The 85 pattern is the same as 84 with this exception. The 5 back goes down as a pass-receiver.

If the quarterback calls for the 83-pass pattern and notices that the 3 zone is open he would next call 84-43. This would send the 4 back into the 3 zone.

If the quarterback wanted the 6 back to go into the 3 zone with the 5 back passing the ball he would call for 84-63.

If the quarterback calls for an 84 pass, and notices that the 2 zone is open, he would next call for 85-52, which would mean that all receivers would follow the same path as on 84 with the addition of the 5 back who would go into the 2 zone.



DIAG. 12

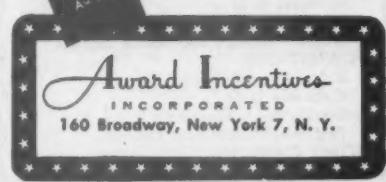


### How to Spur a Sports Program



Many schools are successfully using our carefully integrated systems of incentives to get mass participation in sports. We'll be glad to devise a system suitable for your needs.

Trophies • Medals • Bell-Charms  
Plaques • Emblems  
Write for FREE Catalog



*Award Incentives*  
INCORPORATED  
160 Broadway, New York 7, N. Y.



1948

Rackets

**SQUASH**

CRAGIN  
**SIMPLEX**  
TRADE MARK

NOW—a completely NEW line . . . the best rackets EVER

BE SURE TO SEE and STOCK THEM NOW

for 34 Years the finest name in Rackets

CRAGIN-SIMPLEX CORPORATION  
53 Park Place • New York 7, N. Y.

Send for Our New Catalogue  
and Price List of

### REPAIRS TO INFLATED GOODS

We Can Repair Any Type  
of Leather or Molded  
Inflated Ball

**E. J. CLARKE**

1625 E. DARBY RD., HAVERTOWN, PA.  
P.O. BOX 821 PHONE HILLTOP 5286W

## COACHING SCHOOL LECTURES

Texas High School Football Coaches  
Association Coaching School Textbook  
VOLUME 9—10 LECTURES

1947

Price \$5.00

BO McMILLIN

Indiana University

The Cockeyed T

Z and ZZ Formations from Unbalanced  
Lines

Individual Offensive and Defensive Play

JESS NEELY

Rice Institute

Fundamentals and Building an Offense

T Formation Plays

Defensive Play and Defense Against  
Passes

JOE DAVIS

Rice Institute

Line Play

Stance and Charging

Various Types of Blocking

"CITI-LI" COCHRANE

Indiana University

Backfield Play

Spinning and Pivoting

Fading and Passing

ADOLPH RUPP

University of Kentucky

Kentucky U Style

Fundamentals

Guard Around Plays, Inside Screens

FORREST COX

University of Colorado

Colorado U Style

Double Pivot, Meeting a Zone

Fast Break, Individual Defense

BOBBY CANNON

Edinburg Junior College

Baseball Fundamentals and Strategy

CHUCK CRAMER

Nationally Known Trainer

Injury Care and Prevention

ABB CURTIS

President of Southwest Conference Of-  
ficials Association

Football Rules and Interpretation

ROY BEDICHEK

Texas Interscholastic League

Interscholastic League Problems

Oklahoma Football Coaching School

VOLUME 2—6 LECTURES

Price \$5.00

BERT LA BRUCHERIE

U. C. L. A.

T Formation

Spread and Flanker Plays

Personnel and Assignments

JOHN "OX" DA GROSA

Holy Cross

Single Wing

Building an Offense and Defense

Coaching Responsibility

BUDDY BROTHERS

Tulsa University

The Delayed T Formation

Offensive Kicking Game

Defensive Kicking Game

CHARLES "BUD" WILKINSON

Oklahoma University

Missouri Style T

Minnesota Style

Comparison of Individual Techniques for  
Both

CHUCK CRAMER

Nationally Known Trainer

Training Problems and Techniques

WALLY WALLIS

Oklahoma City Sport Editor

Public Relations

ORDER FROM OTIS COFFEY  
Box 1074

Douglas, Ariz.

## Sprint Champions of the Past Olympics

(Continued from page 6)

"Pell-Mel" Patton, as the Los Angeles sports writers have dubbed him, proved himself every inch of Olympic champion timber. He was thrice timed in 9.3s. for 100 yards and this record as registered in the California Relays at Modesto is now being submitted for international approval as a world-record equaling performance. Likewise he was on three occasions timed in 20.4s. for 220 yards, which is only one-tenth of a second shy of Jesse Owens' world record.

Unfortunately Patton was not timed at the shorter distance of 200 meters in any of these races, or he might well have tied Owen's world record for the metric sprint which is likewise 20.3s.

Late in the season Patton suffered a slight muscle pull and withdrew from competition in the 220, but he was still supreme in the National Collegiate championships, winning the final in 9.7s. after first taking a heat in 9.4s. with a slight favoring wind.

Undoubtedly Owens, as attested by his Olympic championship performances, is the greatest sprint champion of all time. But already Patton has shown indications of attaining even faster marks.

It is far too early to suggest, however, that Patton or any other United States entry will positively win at London. The sudden rise in 1928 of Williams, almost completely unknown to American "fans," although he resided just across the national border, could easily be repeated by some other champion of another nation next year.

Records of past Olympic Games are the best proof that a United States sprinter, although usually winning, does not always prove to be the "world's fastest human."

schools have their best ball-players there.

In the play, shown in Diagram 48, once again we use the standard Notre Dame fullback reverse which has proved to be one of the best plays for us. The ball goes to the left halfback who spins and hands off to the fullback.

The effectiveness of this combination is due in part to the shifting first to the Notre Dame box and then suddenly running from the T.

## The Single Wing (Unbalanced Line)

By Charles Hensch

Richmond, California, High School

THE success of the T formation depends on a passing as well as a running attack. If there is no passing threat the running attack in the T is easily stopped.

My left halfback was not only my best runner, but also my best passer under game conditions. In order to take advantage of his passing as well as his running ability we shifted from a balanced T to an unbalanced single-wing.

The guard on the opposite side from the play crossed behind center on a given signal, leaving a tackle and end on the weak side of the line. As the end on the strong side on the T was out one and a half yards, the strong side guard and tackle moved over one space, allowing room for the weak-side guard. The end and tackle on the weak side shifted into the center, the end one yard outside the tackle.

Two of our favorite plays from the T are shown in Diagrams 49, an end run, and 50, a cross-fire in which the quarterback fakes to the left half and gives the ball to the right half who goes inside the defensive right tackle.

One of our favorite plays from the single-wing is shown in Diagram 51.

## Combining the T with:

(Continued from page 22)

Diagram 45 is a lateral to the left halfback from the action shown in Diagram 44. The only blocking assignments changed are the right end's and right tackle's. The right tackle takes one backward step and whips around the right end for the line-backer.

Diagram 46 is a quarterback sneak. The quarterback throws his weight to his right foot after receiving the ball from center as though starting to the right, setting up a right-guard block.

Diagram 47 shows the regular off-tackle Notre Dame play. We double-team the tackle because we want to make sure that the hole is open there and most high

## from here and there

(Continued from page 4)

the top man. Four other members of the Clemson staff have spent their entire coaching careers at their alma mater. These are Bob Jones, Walter Cox, Banks McFadden and Randy Hinson. . . . The starting backfield at the University of Nebraska averages 172 pounds or two pounds less than the backfield of Lincoln, Nebraska, High School. . . . Edgar Bright, athletic director and coach at Indiana Central College, goes to New York Aggies as head football coach. . . . Eddie Burns goes from Taunton, Massachusetts, High School to Niagara University as backfield coach. . . . Don Weitekamp goes from Boston College High School to Wesleyan University as freshman football, basketball and baseball coach.

## An Assist to the Columnists

(Continued from page 16)

Furthermore, injuries in football are already numerous enough without adding fictitious ones. Injuries and the danger element are the principal cause the public gives for disliking football.

Schools are primarily for the purpose of providing an education, and should not be hesitant in announcing those who fail to meet the particular scholastic requirements. This will do much to raise that institution in the opinion of the public as an educational institution and will, furthermore, remove some of the basis for criticism of school and college athletics.

### Missing the Boat

EDUCATION is supposed to serve the purpose of preparing the youths of the country so that they may better enjoy their lives as mature men and women, and education has done a very respectable job of it. As times have changed, the courses in education have changed to keep in step. Nowadays numerous subjects are included which were unthinkable a few years ago.

Physical education has long preached the value of the sports with a carry-over value, and rightly so. Every student should be taught golf, tennis, badminton, etc.

Educators have missed the boat in not demanding that all new school facilities include a swimming pool. More people engage in sports connected with water than most other sports combined. Frank G. Menke in his very authoritative book, *Encyclopaedia of Sports*, estimates that there are 12,000,000 fishermen annually. One has but to see pictures of Coney Island or Oak Street Beach to grasp the hold swimming has on the American people. The ability to swim is not merely a sport, it is a means of saving life. Last year, 7 per cent of all the accidental deaths in this country were caused by drownings.

Swimming should be given top priority in all physical education programs. Every youth graduating from high schools in localities near water should be required to pass a minimum swimming examination. Many colleges today require a successful completion of such a test as a requirement for a degree. American youth must be taught to swim so that they can enjoy water sports, which lead all others in point of participation. They must also be able to enjoy these sports with a certain degree of safety.

Granted that the one-room school house in the center of the South Dakota wheat fields cannot have a swimming pool, but there is no excuse for new high schools being built without pools, as is actually the case. It is unthinkable that New York City, as close to water as it is, would even consider building new high schools without including swimming pools.

So far the blame for drownings has been placed on faulty equipment and the individual himself. Some day the public is going to wake up and point the finger at education and say, "You fell down."

## COACHES READY REFERENCE SERVICE COUPON

OCTOBER, 1947

As a service to our readers and for their convenience we list here the advertisers appearing in this issue. Many of the concerns offer free booklets and coaching aids. Simply cut along the perforated rule and mail to:

Service Department ATHLETIC JOURNAL  
6858 Glenwood, Chicago 26, Ill.

### COMPLETE LINE

MacGregor Goldsmith, Inc., 35  
Magee Sports Distributors, 38

- Price List on equipment
- Catalog
- Catalog
- Catalog
- Catalog

Rawlings Mfg. Co., Cover 2  
Reach, Wright & Ditson, 1  
Spalding & Bros., A. G., 17  
Wilson Sporting Goods Co., 25

### SHOES

Brooks Shoe Mfg. Co., 41  
Converse Rubber Co., 29

- Information on "Lock-Tite" Washers
- Information on "All Star" basketball shoes
- Free copy of Converse Yearbook
- Information on "Posture Foundation" basketball shoes
- Information
- Information "Ball Band" shoes and socks
- Free Showing "America at Play"
- Name of nearest Riddell dealer for Coaching Aids
- Information on Track and Field Shoes
- Information on "Keds"

Hood Rubber Co., 45

Hyde Athletic Shoe Co., 53  
Mishawaka Rubber & Woolen Mfg. Co., 37

Riddell, Inc., John T., 43

Spot Bilt, Inc., 7  
U. S. Rubber Co., 19

### FOOTBALL CLEATS

Taylor Mfg. Co., 48

- Sample box of cleats

### CLOTHING & LETTERING

Amco Athletic Apparel, 51  
Champion Knitwear Co., 38  
Greene Co., 55  
National Schoolcrafters, 57  
O'Shea Knitting Mills, 59  
Princeton Knitting Mills, 48  
Sand Knitting Mills, 36

- Name of Amco dealer in your locality
- New basketball catalog
- Confidential price lists
- Sweater catalog SA
- Information on O'Shea U-Cloth warmup
- Order blank "N" for award sweaters
- Information

### TRAINERS SUPPLIES

Bike Web Mfg. Co., 27  
Denver Chemical Mfg. Co., 59  
Dodge Co., C. B., 44  
Faherty & Co., John B., 6  
Miller Co., 44  
O. C. Mfg. Co., 47  
Sani-Tread Co., Inc., 58

- New Illustrated Bike Web Catalog K7-10
- Free booklet "Athletic Injuries"
- 36-page booklet "Athlete's Foot"
- Sample set of "Bub" elbow and knee protectors
- Information on Miller Knee Brace
- Information on "Olympic Champion" supporters
- Free sample paper slippers. Age of students from.....to.....

### GYMNASIUM & FIELD EQUIPMENT

Athletic Supply Co., 46  
Fair Play Mfg. Co., 58  
Leavitt Corp., 34  
Morey, Dick, Inc., 52  
National Sports Equipment Co., 57  
Nissen Trampoline Co., 60  
Nurro Companies, Inc., 36  
Porter Corp., J. E., 23

- Information on "No-Whip Bask" nets
- New circulars on Fair Play Scoreboard
- Free seating arrangements and layouts
- Information on "Mori-Model" glass banks and backstops
- Catalog on mats, boxing rings and training bags
- Information
- Free circular
- Large new free catalog

See following page for additional listings.

## SWIMMING SUPPLIES

Kiefer & Co., Adolph, 40  
 Ocean Pool Supply Co., 52

New 12-page catalog.  
 Information on racing trunks, etc.

## TOWELS

McArthur, George & Sons, 34

Information on McArthur School Towel Plan

## FILMS

Association Films, 57  
 Encyclopaedia Britannica Films, Inc., 49  
 Gallagher Film Service, 40

Descriptive folder on sport films  
 Information on basketball and athletic films  
 Information "T Formation Football"

## SELLING LIFE INSURANCE

Mutual Life Insurance Co. of New York, 4

Aptitude Test

## RUBBER BALLS

Seamless Rubber Co., 39

Information on hand balls and squash balls

Volt Rubber Corp., W. J., Cover 3

Catalog and illustrated price list

## RECONDITIONERS

Clarke, E. J., 61

Ivory System, Cover 4

Mages Sports Distributors, 38

Marba System, 21

Raleigh Company, 3

New catalog and price list  
 Information  
 Information  
 Add name to "Observer" list  
 Latest price list and information  
 Booklet on reconditioning  
 Information

## FLOOR FINISHES

Consolidated Laboratories, 53

Brochure on How to Keep Floors New and Safe

Hillyard Co., The, 55

Free copy "Floor Job Specifications"

## FENCING EQUIPMENT

Castello Fencing Equipment Co., Inc., 50

Greco Fencing Equipment Co., 48

Wilkinson Sword Sales Corp., 60

Information

Price List J

Information

## TENNIS EQUIPMENT

Cragin-Simplex Co., 61

Linen Thread Co., 31

Information on squash racquets

Information on tennis nets and all types of sport nets

## AWARDS & TROPHIES

Award Incentives, Inc., 61

New catalog

## BOOKS

(Enclose Money Where Required)

Athletic Journal, 51

Barnes & Co., A. S., 5

Binder, 35 cents each

Barnes Sports Library, \$1.50 each, see adv.

"The New Encyclopaedia of Sports" Frank G. Menke, \$5.00

"Texas Coaching School Notes" \$5.00

"Oklahoma Coaching School Notes" \$5.00

Football Visualizer Scorebook, \$1.50

School Health and Health Education \$3.50

Workbook for Physical Education \$2.25

Coupon will not be honored unless position is stated.

NAME..... POSITION.....

SCHOOL.....

CITY..... ZONE..... STATE.....

## INDEX TO ADVERTISERS

Ameo Athletic Apparel	51
Association Films	57
Athletic Supply Co.	46
Award Incentives, Inc.	61
Barnes & Co., A. S.	5
Bike Web Mfg. Co.	27
Brooks Shoe Mfg. Co.	41
Castello Fencing Equipment Co., Inc.	50
Champion Knitwear Co.	38
Clarke, E. J.	61
Coffey, Otis	62
Consolidated Laboratories	53
Converse Rubber Co.	29
Cragin-Simplex Co.	61
Denver Chemical Mfg. Co., Inc.	59
Dolge Co., C. B.	44
Encyclopaedia Britannica Films, Inc.	49
Fair Play Mfg. Co.	58
Flaherty & Co., Inc., John B.	6
Football Visualizer	46
Gallagher Film Service	40
Greco Fencing Equipment Co.	48
Greene Co.	55
Hillyard Co., The	55
Hood Rubber Co.	45
Hyde Athletic Shoe Co.	53
Ivory System	Cover 4
Kiefer & Co., Adolph	40
Leavitt Corporation	34
Linen Thread Co.	31
McArthur & Sons, George	34
MacGregor Goldsmith, Inc.	35
Mages Sports Distributors	38
Marba System	21
Miller Co., The	44
Mishawaka Rubber & Woolen Mfg. Co.	37
Morey, Dick, Inc.	52
Mosby Co., C. V.	54
Mutual Life Insurance Co. of N. Y., The	4
National Schoolrafters	57
National Sports Equipment Co.	57
Nissen Trampoline Co.	60
Nurre Companies, Inc., The	36
O. C. Mfg. Co.	47
Ocean Pool Supply Co.	52
O'Shea Knitting Mills	59
Porter Corporation, J. E.	23
Princeton Knitting Mills, Inc.	48
Raleigh Co., The	3
Rawlings Mfg. Co.	Cover 2
Reach, Wright & Ditson, A. J.	1
Riddell, Inc., John T.	43
Sand Knitting Mills	36
Sani-Tread Co., Inc.	58
Seamless Rubber Co.	39
Spalding & Bros., A. G.	17
Spot Bilt, Inc.	7
Taylor Mfg. Co.	48
U. S. Rubber Co.	19
Voit Rubber Corp.	Cover 3
Wilkinson Sword Sales Corp.	60
Wilson Sporting Goods Co.	25

S  
51  
57  
46  
61  
5  
27  
41  
50  
38  
61  
62  
53  
29  
61  
59  
44  
49  
58  
6  
46  
40  
48  
55  
55  
45  
53  
r 4  
.40  
34  
31  
34  
.35  
.38  
.21  
.44  
.37  
52  
.54  
.4  
.57  
57  
.60  
.36  
.47  
.52  
.59  
.23  
.48  
.3  
r 2  
.1  
.43  
.36  
.58

**NOW**  
**IT FEELS RIGHT**  
**IT PLAYS RIGHT**

We at VOIT have not tried to revolutionize the athletic ball business with our XB20. Rather, our technical staff has worked to produce a basketball that feels right, plays right and still delivers lots more service at considerably less cost. This great basketball is truly the King of the Court. Its beauty of appearance is topped only by its beauty of performance.

**Voit**  
America's Finest  
Athletic Equipment

1600 E. 25TH STREET, LOS ANGELES 11 • 180 N. WACKER DRIVE, CHICAGO 6

# ANOTHER LINK in the IVORY SYSTEM

*Expansion*



During a period of more than a quarter of a century the IVORY SYSTEM has been hiring men and women to be trained in the art of athletic equipment reconditioning. Today we have the largest and most highly skilled group of reconditioning personnel in existence.

With the recent acquisition of thousands of additional feet of floor space, we are in a better position than ever before to serve our clientele — the Schools and Colleges of the America's.

By the America's we mean the places where the I. S. has done reconditioning work — Canada, Puerto Rico, South America, Cuba, Hawaii, and in all 48 States of the U. S. A.



Ivory System

PEABODY, MASSACHUSETTS

RECONDITIONERS  
OF ATHLETIC  
EQUIPMENT